



# TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE MEETING MATERIALS

October 7, 2010

CALTRANS

BAY AREA TOLL AUTHORITY

CALIFORNIA TRANSPORTATION COMMISSION





## *Letter of Transmittal*

**TO:** Toll Bridge Program Oversight Committee  
(TBPOC)

**DATE:** September 27, 2010

**FR:** Program Management Team (PMT)

**RE:** TBPOC Meeting Materials Packet – October 7, 2010

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Herewith is the TBPOC Meeting Materials Packet for the October 7<sup>th</sup> meeting. The packet includes memoranda and reports that will be presented at the meeting. A Table of Contents is provided following the Agenda to help locate specific topics.

**TBPOC MEETING**  
**October 7, 2010, 10:00am – 1:00pm**  
**Mission Bay Office, 325 Burma Road, Oakland, CA**  
**TBPOC - PMT pre-briefing, 10:00am – 11:00am**  
**TBPOC meeting, 11:00am – 1:00pm**

<b>Topic</b>	<b>Presenter</b>	<b>Time</b>	<b>Desired Outcome</b>
<b>1. CHAIR'S REPORT</b>	S. Heminger, BATA	5 min	Information
<b>2. TBPOC/ ABF/ TYLMN Discussion</b> a. Self-Anchored Suspension (SAS) Superstructure Mitigation and Acceleration Update	PMT	15 min	Information
<b>3. CONSENT CALENDAR</b> a. TBPOC Meeting Minutes: 1) August 27, 2010 Conference Call Minutes* 2) September 2, 2010 Meeting Minutes*  b. Contract Change Orders (CCOs): 1) Yerba Buena Island Transition Structures No. 1 CCO 21 (Compensation for New NPDES (SWPPP) Permit)*	A. Fremier, BATA A. Fremier, BATA  D. Noel, CTC	1 min 1 min  3 min	Approval Approval  Approval
<b>4. PROGRESS REPORTS</b> a. Draft Project Progress and Financial Update September 2010**	A. Fremier, BATA	5 min	Information
<b>5. SAN FRANCISCO-OAKLAND BAY BRIDGE UPDATES</b> a. SAS Update 1) Light Poles Procurement Update* 2) CCO 167 (LED Light Fixtures)*  b. Yerba Buena Island (YBI) Detour 1) Update  c. Yerba Buena Island Transition Structures No. 1 1) City of San Francisco Update/ YBITS1 Structural CCO*  d. Oakland Touchdown No. 2 1) Revised Detour and Staging Concept Update*** 2) OTD2 Bicycle Access Options*	J. Weinstein, BATA T. Anziano, CT  T. Anziano, CT  T. Anziano, CT  B. Maroney, CT S. Hulsebus, CT	5 min 5 min  5 min  20 min  30 min 15 min	Information Approval  Information  Information  Approval Information
<b>6. ANTIOCH/ DUMBARTON BRIDGE SEISMIC RETROFIT UPDATES*</b>	J. Weinstein, BATA	10 min	Information
<b>7. OTHER BUSINESS</b>			
<b>Next TBPOC Meeting: November 9, 2010, 10:00 AM – 1:00 PM</b> <b>Mission Bay Office, Oakland, CA</b>			

\* Attachments

\*\* Stand-alone document included in the binder

\*\*\* Forthcoming or to be sent under separate cover



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### **TBPOC MEETING October 7, 2010**

<b>INDEX TAB</b>	<b>AGENDA ITEM</b>	<b>DESCRIPTION</b>
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<b>2</b>	<b>2</b>	<b>TBPOC/ABF/TYLMN DISCUSSION</b> a. Self-Anchored Suspension (SAS) Superstructure Mitigation and Acceleration Update
<b>3</b>	<b>3</b>	<b>CONSENT CALENDAR</b> a. TBPOC Meeting Minutes 1) August 17, 2010 Conference Call Minutes* 2) September 2, 2010 Meeting Minutes*  b. Contract Change Orders (CCOs) 1) Yerba Buena Island Transition Structures No. 1 CCO 21 (Compensation for New NPDES (SWPPP) Permit)*
<b>4</b>	<b>4</b>	<b>PROGRESS REPORTS</b> a. Draft Project Progress and Financial Update September 2010**
<b>5</b>	<b>5</b>	<b>SAN FRANCISCO-OAKLAND BAY BRIDGE UPDATES</b> a. SAS Update 1) Light Poles Procurement Update* 2) CCO 167 (LED Light Fixtures)*  b. Yerba Buena Island (YBI) Detour 1) Update  c. Yerba Buena Island Transition Structures (YBITS) No. 1 1) City of San Francisco Update/YBITS1 Structural CCO*  d. Oakland Touchdown (OTD) No. 2 1) Revised Detour and Staging Concept Update*** 2) OTD2 Bicycle Access Options*
<b>6</b>	<b>6</b>	<b>ANTIOCH/ DUMBARTON SEISMIC RETROFIT UPDATES</b>
<b>7</b>	<b>7</b>	<b>OTHER BUSINESS</b>

\*Attachments

\*\*Stand-alone document included in the binder

\*\*\*Forthcoming or to be sent under separate cover



## **ITEM 1: CHAIR'S REPORT**

No Attachments

## **ITEM 2: TBPOC/ ABF/ TYLMN DISCUSSION**

### **a. Self-Anchored Suspension (SAS)**

**Superstructure Mitigation and Acceleration  
Update**

## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** September 27, 2010

**FR:** Andrew Fremier, Deputy Executive Director, BATA

**RE:** Agenda No. - 3a1  
Consent Calendar  
Item- TBPOC Meeting Minutes  
August 27, 2010 Conference Call Minutes

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**Recommendation:**  
**APPROVAL**

**Cost:**  
N/A

**Schedule Impacts:**  
N/A

**Discussion:**  
The Program Management Team has reviewed and requests TBPOC approval of the August 27, 2010 Conference Call Minutes.

**Attachment(s):**  
August 27, 2010 Conference Call Minutes





# TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS BAY AREA TOLL AUTHORITY CALIFORNIA TRANSPORTATION COMMISSION

## CONFERENCE CALL MINUTES August 27, 2010, 9:00 AM – 10:00 AM

**Attendees:** TBPOC Members: Steve Heminger, Bimla Rhinehart and Cindy McKim  
PMT Members: Tony Anziano, Andrew Fremier, and Stephen Maller  
Participants: Michele DiFrancia, Beatriz Lacson, Rick Land, Peter Lee, Brian Maroney, Dina Noel, Jon Tapping, Ken Terpstra, and Jason Weinstein

Convened: 9:04 AM

Items		Action
<b>1. SELF-ANCHORED SUSPENSION (SAS) SUPERSTRUCTURE MITIGATION AND ACCELERATION UPDATE</b>		
a. ABF Settlement/ Contract Change Order 160		
<ul style="list-style-type: none"><li>• J. Tapping summarized the following five basic parts of CCO 160 which were agreed upon with ABF: 1) Resolution of East End Delay Impacts; 2) Acceleration of the OBG Lifts 13 and 14; 3) Ready for Seismic Safety Opening; 4) Post “Ready for Seismic Safety Opening” Work; and 5) Schedule Requirements.</li><li>○ The CCO retires past delays and resolves all time issues known to date. Items not included in the CCO, related risk assessment and cost clarifications, were discussed.</li><li>○ Approval of CCO 160 was recommended.</li><li>○ The TBPOC unanimously agreed to implement the draft CCO 160 as settlement package.<ul style="list-style-type: none"><li>➤ S. Heminger, the Chair, noted that B. Luffy will be in town on September 2 and that it would be an opportune time to sign CCO 160.</li></ul></li></ul>		<ul style="list-style-type: none"><li>• The TBPOC <b>APPROVED</b> the draft CCO 160, as presented.</li><li>• Staff to sort out procedural matters to expedite the signing of CCO 160, as discussed.</li></ul>

(continued)

Items	Action
<ul style="list-style-type: none"><li>➤ A revised SAS budget will be discussed and referred to full Authority at the September 8 BATA Oversight Committee (OC) meeting, with approval action scheduled for the September 22 BATA meeting.</li><li>➤ Execution of CCO 160 is anticipated by the week of September 27.</li></ul> <p>b. BATA Meeting Talking Points</p> <ul style="list-style-type: none"><li>• T. Anziano presented, for TBPOC information, three versions of the CCO 160 Talking Points developed for the September 8 BATA (OC) meeting. Discussion was focused on the first version that enumerated the key elements of the CCO.</li><li>○ The Chair suggested tri-agency representation at the BATA OC meeting.</li><li>• The status of the Program Contingency after CCO 160 and net of the Dumbarton adjustment was discussed.</li></ul>	<ul style="list-style-type: none"><li>• The PMT to attend the BATA OC meeting on September 8, 2010.</li><li>• Staff to agendize for the TBPOC September 2 meeting the effect of the Dumbarton adjustment on the Program Contingency.</li></ul>
<p><b>4. OTHER BUSINESS</b></p> <ul style="list-style-type: none"><li>• The Chair confirmed the Governor's trip to China as happening when the second tower shipment occurs.</li><li>• A potential TBPOC trip to China at the end of September will have to be re-scheduled in order to agree with all members' schedules.</li><li>• The next TBPOC meeting is on September 2, 10:00 AM – 1:00 PM, in Oakland.</li></ul>	

Adjourned: 9:37 AM

***(continued)***

**CONFERENCE CALL MINUTES**  
August 27, 2010, 9:00 AM – 10:00 AM

**APPROVED BY:**

\_\_\_\_\_  
**STEVE HEMINGER**, Executive Director  
Bay Area Toll Authority

\_\_\_\_\_  
Date

\_\_\_\_\_  
**BIMLA G. RHINEHART**, Executive Director  
California Transportation Commission

\_\_\_\_\_  
Date

\_\_\_\_\_  
**Cindy McKim**, Director  
California Department of Transportation

\_\_\_\_\_  
Date



## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** September 27, 2010

**FR:** Andrew Fremier, Deputy Executive Director, BATA

**RE:** Agenda No. - 3a2  
Consent Calendar  
Item- TBPOC Meeting Minutes  
September 2, 2010 Meeting Minutes

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**Recommendation:**  
**APPROVAL**

**Cost:**  
N/A

**Schedule Impacts:**  
N/A

**Discussion:**  
The Program Management Team has reviewed and requests TBPOC approval of the September 2, 2010 Meeting Minutes.

**Attachment(s):**  
September 2, 2010 Meeting Minutes



# TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS BAY AREA TOLL AUTHORITY CALIFORNIA TRANSPORTATION COMMISSION

## MEETING MINUTES

September 2, 2010, 10:00am – 1:00pm  
Mission Bay Office, 325 Burma Road, Oakland, CA  
TBPOC – PMT pre-briefing, 10:00am – 11:00am  
TBPOC meeting, 11:00am – 1:00pm

**Attendees:** TBPOC Members: Steve Heminger, Bimla Rhinehart, and Cindy McKim  
PMT Members: Tony Anziano, Andrew Fremier, and Stephen Maller  
Participants: Ade Akinsanya, Alan Cavendish-Tribe, Michele DiFrancia, Rich Foley, Ted Hall, Beatriz Lacson, Rick Land, Peter Lee, Brian Maroney, Bart Ney, Dina Noel, Bijan Sartipi, Pete Siegenthaler, Ken Terpstra, Jon Tapping, Jason Weinstein, and Douglas West  
Part-time: TY Lin – Sajid Abbas, Dennis Jang, Saba Mohan, and Heather Nelson; ABF - Mike Flowers, Bob Luffy, and Peter Vander Waart

Convened: 10:55 AM

Items	Action
<b>1. CHAIR'S REPORT</b> <ul style="list-style-type: none"><li>• NA</li></ul>	
<b>2. CONSENT CALENDAR</b> <ul style="list-style-type: none"><li>a. TBPOC Meeting Minutes<ul style="list-style-type: none"><li>1) July 8, 2010 Conference Call Minutes</li><li>2) July 13, 2010 Meeting Minutes</li><li>3) July 29, 2010 Conference Call Minutes</li><li>4) August 17, 2010 Conference Call Minutes</li></ul></li><li>b. 2011 TBPOC Meeting Calendar</li></ul>	<ul style="list-style-type: none"><li>• The TBPOC <b>APPROVED</b> the Consent Calendar, as presented.</li></ul>
<b>3. PROGRESS REPORTS</b> <ul style="list-style-type: none"><li>a. Draft Project Progress and Financial Update August 2010<ul style="list-style-type: none"><li>• P. Lee presented, for TBPOC information, the draft Project Progress and Financial Update August 2010. The report is awaiting expenditure data through the end of July. Final report will be approved</li></ul></li></ul>	<ul style="list-style-type: none"><li>• The TBPOC confirmed <b>APPROVAL</b> of the draft Project Progress and Financial Update August 2010 by the PMT through TBPOC-delegated authority.</li></ul>

(continued)

Items	Action
by the PMT through TBPOC-delegated authority.	
<p><b>4. SAN FRANCISCO-OAKLAND BAY BRIDGE (SFOBB) UPDATES</b></p> <p>a. Yerba Buena Island Detour (YBID)</p> <p>1) Update</p> <ul style="list-style-type: none"><li>• T. Anziano indicated that the project is on track for completion by October 2010.</li></ul> <p>b. Yerba Buena Island Transition Structures (YBITS) No. 1</p> <p>1) Update</p> <ul style="list-style-type: none"><li>• T. Anziano reported that YBITS No. 1 is at its preliminary stages – work on submittals has started. YBITS No. 1 contractor MCM will move in as soon as YBID contractor CCM moves out.</li></ul> <p>c. Yerba Buena Island Transition Structures (YBITS) No. 2</p> <p>1) Scope Change Request</p> <ul style="list-style-type: none"><li>• T. Anziano presented, for TBPOC information, plans to change the YBITS No. 2 contract scope to include construction of a soldier pile wall and public access paths at the terminus area of the bicycle/pedestrian path at Yerba Buena Island.</li><li>○ Key elements and benefits of the added scope were provided.</li></ul> <p>d. Oakland Touchdown (OTD) No. 2</p> <p>1) Temporary OTD Detour for SFOBB Acceleration</p> <ul style="list-style-type: none"><li>• B. Maroney presented, for TBPOC consideration, a request to approve and/or redirect work with respect to a temporary OTD detour for the purpose of acceleration of OTD and SFOBB East Span opening. A model and poster presentation to illustrate</li></ul>	



(continued)

Items	Action
<p>the stages of detour construction was provided.</p> <ul style="list-style-type: none"> <li>○ Cost, schedule, impact on risk, and work-around strategy to get OTD off the critical path, were discussed.</li> <li>○ A list of five authorizations with respect to this work was requested as follows.               <ol style="list-style-type: none"> <li>1) Approval to continue to develop the plans, specifications, and estimates for this work.</li> <li>2) Approval to move forward with acquiring all necessary right-of-way features as quickly as possible.</li> <li>3) Approval to develop and implement a support budget for this work.</li> <li>4) Approval to develop a plan to execute this work in construction using an expedited process (short list bidding under a Director's order or CCO).</li> <li>5) Approval to delay and revise the scope of OTD2 due to the implementation of the Temporary OTD Detour.</li> </ol> </li> <li>○ The TBPOC thanked the team for bringing this item before the committee.</li> </ul>	<ul style="list-style-type: none"> <li>• The TBPOC <b>APPROVED</b> proceeding with the temporary OTD detour work, as presented, with revisions, as follows:               <ul style="list-style-type: none"> <li>○ Authorization request nos. 1 and 5 approved as written.</li> <li>○ Authorization request no. 2 approved to initiate discussions on right-of-way and utility acquisitions, as quickly as possible, including FHWA discussions;</li> <li>○ Authorization request no. 3 approved to develop a support budget and spend support funds in an amount not to exceed \$2M; and</li> <li>○ Authorization request no. 4 approved as written, with staff to update the TBPOC at its October 7 meeting.</li> </ul> </li> <li>• The TBPOC instructed the team to examine an additional alignment that maximizes the amount of permanent features constructed as part of the detours.</li> </ul>
<p><b>5 ANTIOCH/ DUMBARTON BRIDGE RETROFIT</b></p> <p>a. Updates</p> <ul style="list-style-type: none"> <li>• NA</li> </ul> <p>b. Dumbarton Bridge Seismic Retrofit</p>	

(continued)

Items	Action
<p>Budget Change</p> <ul style="list-style-type: none"> <li>J. Weinstein presented, for TBPOC approval, a request to revise the Dumbarton Seismic Retrofit budget to \$267M, based on the Capital Outlay (CO) and Capital Outlay Support (COS) forecasts in the 2<sup>nd</sup> Quarter 2010 report. Additionally, the PMT recommended returning \$216M to BATA.</li> </ul>	<ul style="list-style-type: none"> <li>The TBPOC <b>APPROVED</b> the request to change the Dumbarton Seismic Retrofit budget to \$267M, as presented, and the return of \$216M to BATA, as recommended.</li> </ul>
<p><b>6 TBPOC/ABF/ TYLMN Discussion</b></p> <p>a. Self-Anchored Suspension (SAS) Superstructure Mitigation and Acceleration Update</p> <ul style="list-style-type: none"> <li>See item 6c below.</li> </ul> <p>b. SAS Superstructure Budget Change</p> <ul style="list-style-type: none"> <li>T. Anziano presented, for TBPOC approval, a request to change the current SAS budget and increase it by \$293M, based on the 2<sup>nd</sup> Quarter 2010 forecast for Capital Outlay. <ul style="list-style-type: none"> <li>A budget change is required in order to draw from budgeted program contingency, as the current SAS project contingency is insufficient to cover the cost of CCO 160.</li> </ul> </li> </ul> <p>c. SAS Superstructure CCO 160</p> <ul style="list-style-type: none"> <li>J. Tapping reported on two minor revisions made to CCO 160 that were agreed to by ABF. <ul style="list-style-type: none"> <li>A cover letter was prepared for Department and ABF signature, forwarding CCO 160 for execution, and sets out the agreement reached in principle between the Department and ABF. Funding obligations are contingent upon BATA approval on September 22, 2010 of an allocation of already budgeted TBSRP contingency funds. <ul style="list-style-type: none"> <li>T. Anziano and M. Flowers</li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>The TBPOC <b>APPROVED</b> the request to change the SAS budget, as presented.</li> <li>The TBPOC <b>APPROVED</b> the execution of CCO 160, as presented.</li> </ul>

**(continued)**

<b>Items</b>	<b>Action</b>
<p>jointly signed the transmittal letter on behalf of the Department and ABF, respectively.</p> <ul style="list-style-type: none"><li>• B. Luffy expressed confidence in the execution of CCO 160. M. Flowers gave a brief update on the work in China.<ul style="list-style-type: none"><li>○ Lifts 13 and 14 work is proceeding at an improved pace; the second tower lift is largely completed; OBG 9 east and west assembly is ongoing.</li><li>○ ZPMC now has an incentive to finish the job. Mr. Kang is very much engaged in the process.</li></ul></li><li>• The Chair thanked J. Tapping and P. Vander Waart for their exemplary efforts in getting the major contract changes implemented.</li><li>• The Chair congratulated B. Luffy on his impending retirement, and presented him with a parting gift in appreciation for his contribution to the SAS project.<ul style="list-style-type: none"><li>○ B. Luffy will be succeeded by M. Flowers as President and Chief Executive Officer of American Bridge Company.</li></ul></li></ul>	
<p><b>7 OTHER BUSINESS</b></p> <ul style="list-style-type: none"><li>• The TBPOC agreed to move the October 7, 2010 meeting venue from the Bay Area to Sacramento.</li></ul>	<ul style="list-style-type: none"><li>• Staff to coordinate the TBPOC October 7, 2010 meeting venue change from Oakland to Sacramento, 1:00pm – 4:00pm.</li></ul>

Adjourned: 12:55 PM



***(continued)***

**TBPOC MEETING MINUTES**  
September 2, 2010, 10:00am – 1:00pm

**APPROVED BY:**

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**STEVE HEMINGER**, TBPOC Chair  
Executive Director, Bay Area Toll Authority

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Date

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**BIMLA G. RHINEHART**, TBPOC Vice-Chair  
Executive Director, California Transportation Commission

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Date

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**CINDY McKIM**  
Director, California Department of Transportation

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Date

## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** September 27, 2010

**FR:** Dina Noel, Assistant Deputy Director Toll Bridge Program, CTC

**RE:** Agenda No. - 3b1

Item- Yerba Buena Island Transition Structure (YBITS) Contract Change  
Order No. 21-S1 – Compensation for New National Pollution  
Discharge Elimination System (NPDES) for the Storm Water  
Protection and Prevention Plan (SWPPP) Permit

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**Recommendation:**

**APPROVAL**

**Cost:**

CCO 21-S1: \$2,550,060.00

**Schedule Impacts:** Deferred

**Discussion:**

**CCO 21-S1 in the amount \$2,550,060** is necessary to pay for the incorporation of Caltrans' new general permit issued by the Water Resources Control Board. The new permit which shall be implemented under the contractor's Storm Water Pollution Prevention Plan (SWPPP) will require year round SWPPP measures in lieu of the previous 6-month seasonal measures. Additionally, the YBITS contract has been classified as a Risk Level 2 project under the new permit which requires extensive pre-storm, active storm and post-storm reporting and testing to be performed. The project will also require the contractor to provide a full time licensed SWPPP manager in order to ensure compliance with the new permit.

The original Change Order No. 21 incorporated the new permit into the contract. This supplement provides compensation for the work to be performed. Due to the change in character of the work, compensation for all SWPPP related activities will be paid on a force account basis with the as-bid contract bid items being eliminated. Work includes the placement of temporary water pollution control measures, construction site management, sweeping, testing of storm water effluent and the preparation and submittal of the required plans and reports.

**Attachment(s):**

1. Draft CCO: 21-S1
2. Draft CCO Memorandum: 21-S1

**CONTRACT CHANGE ORDER**

Change Requested by: Engineer

<b>CCO: 21</b>	<b>Suppl. No. 1</b>	<b>Contract No. 04 - 0120S4</b>	<b>Road SF-80-12.7/13.2</b>	<b>FED. AID LOC.: NO FED AID</b>
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**To: M C M CONSTRUCTION INC**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the Engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Cost incurred by the Contractor pertaining to compliance to the following sections of the Contract Special Provisions, including the revisions incorporated under the original Change Order No. 21, shall be compensated on a force account basis in lieu of the contract bid item prices associated with this work:

Section 5-1.26 Relations with California Regional Water Quality Control Board  
 Section 10-1.04 Water Pollution Control  
 Section 10-1.05 Construction Site management  
 Section 10-1.06 Temporary Active Treatment System  
 Section 10-1.07 Sweeping  
 Section 10-1.08 Turbidity Control  
 Section 10-1.09 Temporary Hydraulic Mulch (Bonded Fiber Matrix) Section 10-1.10 Temporary Cover  
 Section 10-1.11 Temporary Concrete Washout  
 Section 10-1.12 Temporary Check Dam  
 Section 10-1.13 Temporary Silt Fence  
 Section 10-1.15 Temporary Gravel Bag Berm  
 Section 10-1.16 Temporary Construction Entrance  
 Section 10-1.17 Move In/Move Out (Temporary Erosion Control)  
 Section 10-1.18 Temporary Drainage Inlet Protection

**Estimate of Decrease in Contract Item at Contract Price:**

Item No. 8: CONSTRUCTION SITE MANAGEMENT			
-1 LS	(-100.00%)	@ \$15,000.00 /LS	= -\$15,000.00 (-100.00%)
Item No. 10: PREPARE STORM WATER POLLUTION			
-1 LS	(-100.00%)	@ \$10,000.00 /LS	= -\$10,000.00 (-100.00%)
Item No. 11: TEMPORARY SILT FENCE			
-410 M	(-100.00%)	@ \$11.00 /M	= -\$4,510.00 (-100.00%)
Item No. 12: TEMPORARY GRAVEL BAG BERM			
-200 M	(-100.00%)	@ \$7.00 /M	= -\$1,400.00 (-100.00%)
Item No. 13: TEMPORARY CONSTRUCTION ENTRANCE			
-5 EA	(-100.00%)	@ \$5,000.00 /EA	= -\$25,000.00 (-100.00%)
Item No. 14: TEMPORARY COVER			
-1130 M2	(-100.00%)	@ \$6.00 /M2	= -\$6,780.00 (-100.00%)
Item No. 15: TEMPORARY CHECK DAM			
-39 M	(-100.00%)	@ \$50.00 /M	= -\$1,950.00 (-100.00%)
Item No. 16: MOVE-IN/MOVE-OUT			
-4 EA	(-100.00%)	@ \$750.00 /EA	= -\$3,000.00 (-100.00%)
Item No. 17: TEMPORARY DRAINAGE INLET PROTECTION			
-13 EA	(-100.00%)	@ \$200.00 /EA	= -\$2,600.00 (-100.00%)
Item No. 18: TEMPORARY HYDRAULIC MULCH			
-4500 M2	(-100.00%)	@ \$1.00 /M2	= -\$4,500.00 (-100.00%)
Item No. 19: STREET SWEEPING			
-1 LS	(-100.00%)	@ \$25,000.00 /LS	= -\$25,000.00 (-100.00%)
Item No. 20: TEMPORARY CONCRETE WASHOUT BIN			
-200 EA	(-100.00%)	@ \$1.00 /EA	= -\$200.00 (-100.00%)

**CONTRACT CHANGE ORDER**

Change Requested by: Engineer

CCO: 21	Suppl. No. 1	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID
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Item No. 21: TEMPORARY ACTIVE TREATMENT SYSTEM

-1 LS (-100.00%) @ \$50,000.00 /LS = -\$50,000.00 (-100.00%)

In accordance with Section 4-1.03B(3), "Eliminated Items," of the Standard Specifications, the adjustment due to the elimination of Contract Item No. 8 and Contract Item No. 10 through Contract Item No. 21 is Zero.

Estimated total cost for Decrease in Contract Item.....(\$149,940.00)

**Extra Work at Force Account:**

Perform all work necessary in order to comply with the Department's current statewide general permit issued by the State Water Resources Control Board (SWRCB) titled "Order No. 2009-0009-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction and Land Disturbance Activities" as specified under the Special Provision sections listed under this change order, including the revisions incorporated under the original Change Order No. 21, and as determined by the Engineer.

Estimated cost of Extra Work at Force Account .....\$2,700,000.00

Consideration of a time adjustment will be deferred until completion of the work specified herein. Determination of a commensurate time extension will be made in accordance with Section 8-1.07, "Liquidated Damages", of the Standard Specifications and Section 10-1.22 "Progress Schedule (Critical Path Method)" of the Special Provisions.

Estimated Cost: Increase ☒ Decrease ☐ \$2,550,060.00

By reason of this order the time of completion will be adjusted as follows: Deferred

**Submitted by**

Signature	Resident Engineer Rajesh Oberoi, Senior R.E.	Date
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**Approval Recommended by**

Signature	Area Construction Manager Deanna Vilcheck	Date
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**Engineer Approval by**

Signature	Principal T.E. Mike Forner	Date
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We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

**NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.**

**Contractor Acceptance by**

Signature	(Print name and title)	Date
-----------	------------------------	------

**CONTRACT CHANGE ORDER MEMORANDUM**

DATE: 9/15/2010 Page 1 of 2

TO: Deanna Vilcheck, ACM /			FILE: <b>E.A.</b> 04 - 0120S4	
FROM: Rajesh Oberoi, Senior R.E.			<b>CO-RTE-PM</b> SF-80-12.7/13.2	
			<b>FED. NO.</b> NO FED AID	
CCO#: <b>21</b>	SUPPLEMENT#: <b>1</b>	Category Code: <b>CXSA</b>	CONTINGENCY BALANCE (incl. this change) <b>\$26,204,152.00</b>	
COST: <b>\$2,550,060.00</b> INCREASE <input checked="" type="checkbox"/> DECREASE <input type="checkbox"/>			HEADQUARTERS APPROVAL REQUIRED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
SUPPLEMENTAL FUNDS PROVIDED: <b>\$0.00</b>			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
<b>CCO DESCRIPTION:</b> NEW CONSTRUCTION GENERAL PERMIT( CGP)			<b>PROJECT DESCRIPTION:</b> YBITS-1 (Yerba Buena Island Transition Structures)	
Original Contract Time: <b>1390</b> Day(s)	Time Adj. This Change: <b>DEF</b> Day(s)	Previously Approved CCO Time Adjustments: <b>0</b> Day(s)	Percentage Time Adjusted: (including this change) <b>0</b> %	Total # of Unreconciled Deferred Time CCO(s): (including this change) <b>0</b>

**THIS CHANGE ORDER PROVIDES FOR:**

An adjustment of compensation for water pollution control work to be performed in order to comply with the Department's new National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance.

This project, the Yerba Buena Island Transition Structure (YBITS), provides for the construction of two bridges which will connect eastbound and westbound traffic on the new east span of the San Francisco Oakland Bay Bridge (SFOBB) from the signature Self-Anchored Suspension Bridge to the existing Yerba Buena Island tunnel. The structures are comprised of concrete box girder bridges each approximately 40 meters high and 450 meters in length.

The original Change Order No. 21 incorporated the Department's new National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance (Order No. 2009-009-DWQ), Construction General Permit (CGP) effective July 1, 2010. The new permit implements year-round soil stabilization and sediment control best management practices in place of current rainy season requirements, increases the reporting and monitoring requirements for storm water discharges and provides changes for existing storm water pollution prevention plans to be in compliance with the new CGP. Several sections of the contract special provisions were modified under the original change order to reflect these changes.

The new CGP does not contain a defined rainy season and therefore requires installation of soil stabilization and sediment control best management practices year-round. Soil stabilization and sediment controls must be installed on inactive areas of construction if the area is not scheduled to be re-disturbed for more than 14 days. The contractor will need to be compensated for additional mobilizations of crews and equipment necessary to install soil stabilization and sediment controls during the contract-specified non-rainy season. The contractor will also need to be compensated for any adjustments because of the need to apply soil stabilization and sediment controls on small areas versus the larger areas allowed when there was a rainy season definition and for providing a dedicated water pollution control manager.

Compensation for these additional costs were deferred under the original change order.

This change order provides for all work pertaining to compliance with the new NPDES permit to be compensated on a force account basis. The existing contract items for the contractor's as-bid work pertaining to compliance with the old NPDES permit will be deleted. This adjustment of compensation shall be enacted due to the following conditions existing on this project:

1). This contract has been designated as a Risk Level 2 project, as defined under the new permit, which will require extensive pre-storm, active storm and post-storm reporting and testing to be performed. In addition to the already increased requirements for year round soil stabilization and sediment controls, these added measures will be difficult to segregate from the contractor's as-planned contract item operations. Maintenance costs associated with installed storm water pollution prevention (SWPP) measures is paid at 50% of the costs incurred in accordance with the special provisions further complicating the cost segregation. Compensating the work solely on a force account basis will eliminate compensation disputes and prevent double payment on work performed.

2). It is anticipated that additional SWPP measures will be ordered under this contract due to the high profile of the SFOBB east span corridor projects. Being the only active land (island) based contract on the corridor, having the higher risk level

**CONTRACT CHANGE ORDER MEMORANDUM**

EA: 0120S4 CCO: 21 - 1

DATE: 9/15/2010 Page 2 of 2

assignment and having a high risk slope directly adjacent to the San Francisco Bay, the engineer along with corridor SWPPP oversight staff have historically recommended an increased level of protection on Yerba Buena Island. These additional measures will need to be compensated separately from the as-bid work.

3). Field estimates based on the last 4 years on the Yerba Buena Island Detour Project, which occupied the same jobsite as this contract, indicate that the Engineer's estimate of contract item quantities for required SWPP measures is significantly underestimated. This will required an adjustment of these items, based on a force account basis, for the work in excess of 125% of the as-bid quantity of work resulting in the majority of the work being performed at the same force account basis being stipulated under this change order.

4). The Department will be mitigating risk to the opening of the new SFOBB east span by implementing additional SWPP measures and ensuring NPDES compliance. Were the contract found to be non-compliant to the Department's permit, the project could incur significant delay potentially affecting the planned opening of the new east span.

Due to the conditions outlined above, this change order will delete the contract bid item work and compensate all work on a force account basis. This will eliminate the need to adjust all 13 contract bid items and allow the Department to implement SWPP measures as determined necessary as the specific requirements of the new permit become clarified

The change order will eliminate 13 contract items at contract prices for a credit of \$149,940.00. All costs associated with implementing the project wide SWPP measures will be paid as extra work at force account at an estimated cost of \$2,700,000. The net change order cost of \$2,550,060 shall be financed from the contract's supplemental funds and the contract's contingency balance. Supplemental funding of \$66,000 was provided for additional water pollution and erosion control measures and for maintenance sharing costs. A cost analysis is on file.

Any adjustment of contract time is deferred as the additional requirements may affect the controlling operation.

Maintenance concurrence is not required as the change doesn't affect any permanent roadway features.

CONCURRED BY:		ESTIMATE OF COST	
Construction Engineer: Rajesh Oberoi	Date	THIS REQUEST	TOTAL TO DATE
Bridge Engineer:	Date	ITEMS (\$149,940.00)	(\$149,940.00)
Project Engineer:	Date	FORCE ACCOUNT \$2,700,000.00	\$2,700,000.00
Project Manager:	Date	AGREED PRICE \$0.00	\$0.00
FHWA Rep.:	Date	ADJUSTMENT \$0.00	\$0.00
Environmental:	Date	<b>TOTAL</b> \$2,550,060.00	\$2,550,060.00
Other (specify):	Date	<b>FEDERAL PARTICIPATION</b>	
Other (specify):	Date	<input type="checkbox"/> PARTICIPATING <input type="checkbox"/> PARTICIPATING IN PART <input checked="" type="checkbox"/> NONE <input type="checkbox"/> NON-PARTICIPATING (MAINTENANCE) <input type="checkbox"/> NON-PARTICIPATING	
District Prior Approval By:	Date	FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type)	
HQ (Issue/Approve) By:	Date	<input type="checkbox"/> CCO FUNDED PER CONTRACT <input type="checkbox"/> CCO FUNDED AS FOLLOWS	
Resident Engineer's Signature:	Date	FEDERAL FUNDING SOURCE	PERCENT

## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** September 27, 2010

**FR:** Andrew Fremier, Deputy Director, BATA

**RE:** Agenda No. - 4a  
Progress Reports  
Item- Draft Project Progress and Financial Update September 2010

---

**Recommendation:**

For Information Only/ Approval Confirmation

**Cost:**

N/A

**Schedule Impacts:**

N/A

**Discussion:**

Included in this package, for TBPOC information, is a draft Project Progress and Financial Update September 2010. By meeting time, the report will have been reviewed and approved by the PMT through TBPOC-delegated authority, and released on October 5, 2010. TBPOC confirmation of this approval is requested.

**Attachment(s):**

Draft Project Progress and Financial Update September 2010 (see end of binder)

# San Francisco Bay Area Toll Bridge Seismic Retrofit and Regional Measure 1 Programs

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## Project Progress and Financial Update September 2010

### Version 6.0

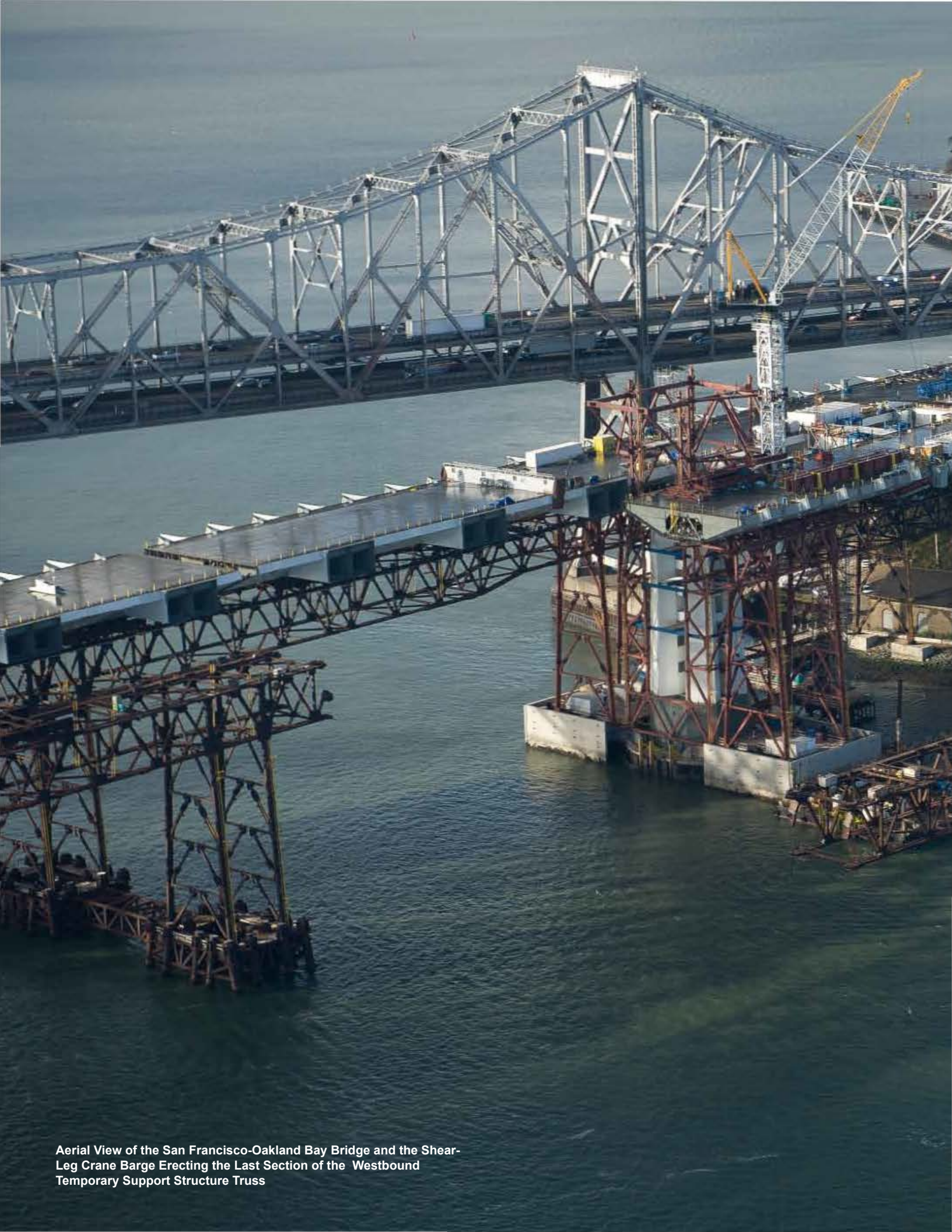


**TOLL BRIDGE PROGRAM  
OVERSIGHT COMMITTEE**

CALTRANS BAY AREA TOLL AUTHORITY CALIFORNIA TRANSPORTATION COMMISSION

**Released: October 2010**





Aerial View of the San Francisco-Oakland Bay Bridge and the Shear-Leg Crane Barge Erecting the Last Section of the Westbound Temporary Support Structure Truss









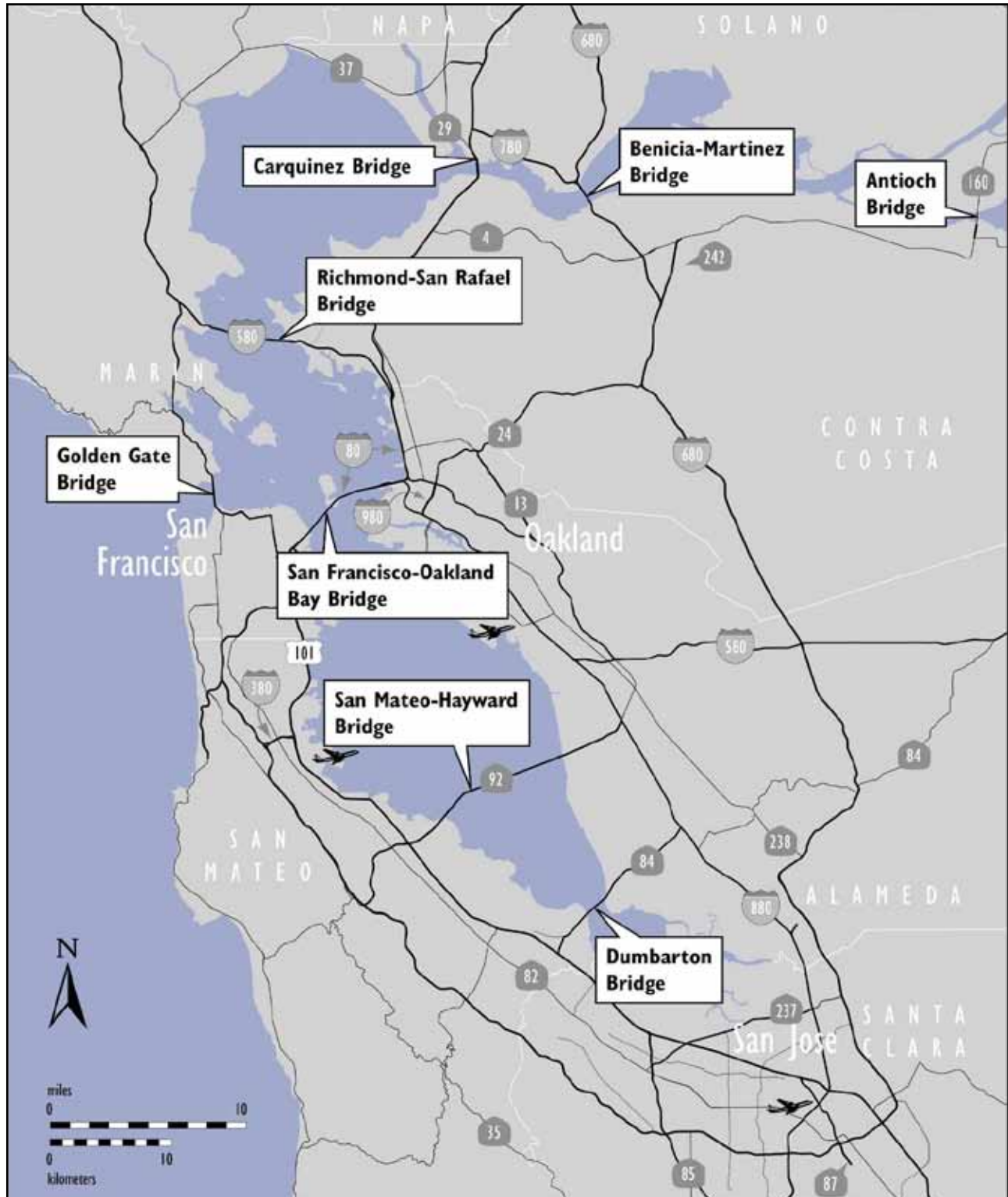
SAS Roadway Boxes 1 through 8  
Eastbound and Tower Lift 1

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## Map of Bay Area Toll Bridges



\* The Golden Gate Bridge is owned and operated by the Golden Gate Bridge, Highway, and Transportation District.

## Introduction

In July 2005, Assembly Bill (AB) 144 (Hancock) created the Toll Bridge Program Oversight Committee (TBPOC) to implement a project oversight and project control process for the Benicia-Martinez Bridge and State Toll Bridge Seismic Retrofit Program projects. The TBPOC consists of the Caltrans Director, the Bay Area Toll Authority (BATA) Executive Director and the Executive Director of the California Transportation Commission (CTC). The TBPOC's project oversight and control processes include, but are not limited to, reviewing bid specifications and documents, providing field staff to review ongoing costs, reviewing and approving significant change orders and claims in excess of \$1 million (as defined by the Committee) and preparing project reports. AB 144 identified the Toll Bridge Seismic Retrofit Program (TBSRP) and the new Benicia-Martinez Bridge Project as being under the direct oversight of the TBPOC. In January 2010, Assembly Bill (AB) 1175 (Torlakson) amended the TBSRP to include the Antioch and Dumbarton seismic retrofit projects. The current Toll Bridge Seismic Retrofit Program is as follows:

Toll Bridge Seismic Retrofit Projects	Seismic Safety Status
Dumbarton Bridge Seismic Retrofit	Construction
Antioch Bridge Seismic Retrofit	Construction
San Francisco-Oakland Bay Bridge East Span Replacement	Construction
San Francisco-Oakland Bay Bridge West Approach Replacement	Complete
San Francisco-Oakland Bay Bridge West Span Seismic Retrofit	Complete
San Mateo-Hayward Bridge Seismic Retrofit	Complete
Richmond-San Rafael Bridge Seismic Retrofit	Complete
1958 Carquinez Bridge Seismic Retrofit	Complete
1962 Benicia-Martinez Bridge Seismic Retrofit	Complete
San Diego-Coronado Bridge Seismic Retrofit	Complete
Vincent Thomas Bridge Seismic Retrofit	Complete

The New Benicia-Martinez Bridge is part of a larger program of toll-funded projects called the Regional Measure 1 (RM1) Toll Bridge Program under the responsibility of BATA and Caltrans. While the rest of the projects in the RM1 program are not directly under the responsibility of the TBPOC, BATA and Caltrans will continue to report on their progress as an informational item. The RM1 program includes:

Regional Measure 1 Projects	Open to Traffic Status
Interstate 880/State Route 92 Interchange Reconstruction	Construction
1962 Benicia-Martinez Bridge Reconstruction	Open
New Benicia-Martinez Bridge	Open
Richmond-San Rafael Bridge Deck Overlay Rehabilitation	Open
Richmond-San Rafael Bridge Trestle, Fender & Deck Joint Rehabilitation	Open
Westbound Carquinez Bridge Replacement	Open
San Mateo-Hayward Bridge Widening	Open
State Route 84 Bayfront Expressway Widening	Open
Richmond Parkway	Open

## SUMMARY OF MAJOR PROJECT HIGHLIGHTS, ISSUES, AND ACTIONS



Aerial View of the Shear-Leg Crane Barge Erecting the Last Section of the Westbound Temporary Support Structure Truss



YBITS Column 7 Slopes Compacted



SAS Roadway Box 8 on Barge

### Toll Bridge Seismic Retrofit Program Risk Management

A major element of the 2005 AB144, the law creating the TBPOC, was legislative direction to implement a more aggressive risk management program. Such a program has been implemented in stages over time to ensure development of a robust and comprehensive approach to risk management. A milestone has been reached in the risk management program with all elements now fully incorporated, resulting in one of the most detailed and comprehensive risk management programs in the country today.

A comprehensive risk assessment is performed for each project in the program. Based upon those assessments, a forecast is developed using the average cost of risk. These forecasts can both increase and decrease as risks are identified, resolved or retired. Nonetheless, assurances have been made that the public is informed of the risks that have been identified and the possible expense they could necessitate.

As of the end of the second quarter of 2010, the 50 percent probable draw on Program Contingency is \$367 million. The potential draw ranges from about \$200 million to \$550 million. Program Contingency decreased by \$240 million in the second quarter of 2010. The majority of the reduction can be explained by the removal of \$137 million from the Antioch Bridge budget, transfer of \$203 million to the East Span COS budget, both of which were partially offset by a decrease in the Dumbarton Bridge cost estimate.

The current Program Contingency balance is sufficient to cover the cost of currently identified risks. Risk mitigation actions are continuously developed and implemented to reduce the potential draw on the Program Contingency.

### San Francisco-Oakland Bay Bridge (SFOBB) East Span Seismic Replacement Project SAS Superstructure Contract

The prime contractor constructing the Self-Anchored Suspension (SAS) Bridge from the completed Skyway to Yerba Buena Island is a joint venture of American Bridge/Fluor (ABF). **Significant progress is being made both in the Bay Area and around the world. The first 16 of 28 steel roadway boxes have arrived and all 16 will have been lifted into place by the end of**





San Francisco-Oakland Bay Bridge Detour Structure Completed over the Labor Day Weekend 2009

September 2010. The next two steel roadway boxes, 9 east and westbound, will be shipped on September 18, 2010 and are expected to arrive at Pier 7 in Oakland on October 10, 2010. These boxes, fabricated in Shanghai, China, join other bridge components that have been arriving from around the country and the world.

The first shipment of tower lift shafts have been placed into position on top of the tower foundation. All bridge components undergo a rigorous quality review by the fabricator, ABF, and Caltrans to ensure that only bridge components that have been built in accordance to the specifications will be shipped. Shipments of roadway and tower boxes will continue throughout the year.

The completion of the last roadway sections at the east end of the new span are on the critical path and the east end fabrication has been delayed due to the complexity of the work. The TBPOC is currently in the process of negotiating with the contractor to address these challenges, mitigate delays, and to accelerate the remaining work with a goal of opening the bridge to traffic by 2013. One option being discussed is a "seismic safety opening" of the bridge to traffic before non-essential systems are completed, like architectural lighting or removal of unneeded temporary support structures.

On September 2, 2010, the Toll Bridge Program Oversight Committee (TBPOC), (Caltrans, CTC, and BATA) will review the budget for the San Francisco-Oakland Bay Bridge (SFOBB) Self Anchored Suspension Span (SAS) contract to facilitate the payment of a Contract Change Order (CCO) between Caltrans and American Bridge/Flour. The CCO is intended to resolve the delays that occurred during the development to date of the East End roadway boxes (OBG) sections and provide incentives and disincentives for project

acceleration to meet milestones for delivery of critical roadway segments and seismic safety opening of the new east span by the end of 2013. Execution of the CCO will require the Bay Area Toll Authority to take a budget revision and a revised fund allocation action on September 22, 2010 to fund the proposed action.

The TBPOC will be requested to recommend that the budget for the contract be revised to equal the \$2.0 billion 2nd Quarter 2010 forecast for the contract, an increase of \$293 million. This action will not require any change to the overall Toll Bridge Seismic Retrofit Program budget because there are adequate program contingency funds available to cover this budget change for the SAS contract.

## Yerba Buena Island Detour Contract

The Yerba Buena Island Detour contractor, C.C. Myers, has rolled out the existing bridge span and rolled in the new east tie-in span of the detour structure that diverts traffic off the existing bridge to the detour structure that now ties into the Yerba Buena Island Tunnel. The traffic switch occurred as scheduled on Labor Day weekend. Work is completed on the demolition of the old approach span and construction continues on a number of accelerated foundations for the future transition structures from the Self-Anchored Suspension (SAS) bridge to the tunnel. Upon completion of future accelerated transition structure columns, the area will be turned over to the Yerba Buena Island Transition Structures (YBITS) #1 contractor that will construct the new approach structures.

## Yerba Buena Island Transition Structures #1 Contract

The YBITS#1 contract has been awarded to MCM Construction, the same contractor that completed the Oakland Touchdown (OTD) #1 contract. Construction will not start until the demolition of the existing approach and YBITS advanced columns have been completed. MCM mobilized and began delivering equipment and material to start construction in September 2010.



## SUMMARY OF MAJOR PROJECT HIGHLIGHTS, ISSUES, AND ACTIONS



Oakland Touchdown Bike Path and Hand Railing



Oakland Touchdown Service Platforms Installed



Aerial View of Oakland Touchdown Looking East

### Oakland Touchdown #1 Contract

The Oakland Touchdown (OTD) #1 contractor, MCM Construction completed the work on June 8, 2010. The contract constructed the westbound approach from the toll plaza to the Skyway structure and the portion of the eastbound approach that is not in conflict with the existing bridge structure. Discussions are underway to expedite the bridge opening by constructing a detour and portions of OTD #2.

### TBSRP Capital Outlay Support

Based on initial discussions with the contractors, early completion of the East Span Project was believed to be possible and sufficient to mitigate potential identified support cost increases. The support cost increases are primarily due to the need to re-advertise the SAS contract, and to increase opportunities for early completion of the East Span Project. These decisions include a 12-month schedule extension provided during bid time to attract the maximum number of bidders for the SAS contract, and an extension of the YBI Detour contract to advance future foundation and column work of the transition structure and west end deck reconstruction. Since early completion and the intended cost savings are deemed to be unlikely, action was taken to transfer program contingency funds to cover the costs by the end of the second quarter of 2010. Opportunities to economize and reduce costs in this area will continue to be pursued.

### TBSRP Programmatic Risks

This category includes risks that are not yet scoped within existing contracts and/or that spread across multiple contracts. The interdependencies between all of the contracts in the program result in the potential for one contract's delay to impact the entire program that are accounted for in the net programmatic risks.

### Dumbarton Bridge Seismic Retrofit

When first conceived, the Toll Bridge Seismic Retrofit Program only identified seven of the nine state owned toll bridges to be in need of seismic retrofit, which excluded the Dumbarton and Antioch Bridges. Further seismic vulnerability studies on those structures completed by Caltrans and BATA determined that they were in need of retrofit based on current seismic



Dumbarton Bridge

standards. On June 15, 2010, Caltrans opened seven bids for the Dumbarton Bridge Seismic Retrofit Project. The Dumbarton Retrofit Project had an engineer's estimate of \$73 million, which included supplemental work and contract contingencies, and included a maximum construction duration of 810 working days. The low bidder, Shimmick Construction Company, Inc. was substantially less at \$46.6 million. Given the low bid for project construction and the current estimated support costs and project contingencies, On September 2, 2010, the TBPOC will review the budgeting for the project. Given the low bid for project construction and the current estimated support costs and project contingencies, it is proposed that the budget be revised to a total of \$267 million, which is \$216 million below the original estimate.



Antioch Bridge

### Antioch Bridge Seismic Retrofit

Bids for the Antioch Bridge Retrofit Contract were opened on March 10, 2010. The contract was awarded to California Engineering Contractors, Inc. on April 22, 2010. The awarded contract was significantly less than the engineer's estimate for the work and has resulted in a significant cost forecast reduction. The original budget for the project was \$267 million. Because of the low bid, the TBPOC is forecasting a need for only \$98 million to complete the project. The retrofit is forecast to be completed by May 2012.

### Regional Measure 1 Toll Bridge Program (RM1)

#### Interstate 880/State Route 92 Interchange Reconstruction Project

On this Interchange Reconstruction Project, the new eastbound State Route 92 to northbound Interstate 880 direct connector structure (ENCONN) was completed and opened to detour traffic on May 16, 2009, while the southern half of the new separation structure was opened in April 2010 to detour traffic. Work is now ongoing on the remaining northern half of the separation structure. The project is forecast to be substantially completed in September 2011, pending weather or unforeseen construction delays.



92/880 NWCONN Bridge Construction in Progress

## Toll Bridge Seismic Retrofit Program Cost Summary

	Contract Status	AB 144/SB 66 Budget (July 2005)	TBPOC Approved Changes	Current TBPOC Approved Budget (August 2010)	Cost to Date (June 2010)	Current Cost Forecast (August 2010)	Cost Variance	Cost Status
		a	b	c = a + b	d	e	f = e - c	
<b>SFOBB East Span Seismic Replacement</b>								
Capital Outlay Construction								
Skyway	Completed	1,293.0	(38.9)	1,254.1	1,236.9	1,254.1	-	●
SAS Marine Foundations	Completed	313.5	(32.6)	280.9	274.8	280.9	-	●
SAS Superstructure	Construction	1,753.7	-	1,753.7	1,054.0	2,046.8	293.1	●
YBI Detour	Construction	131.9	360.9	492.8	452.8	489.4	(3.4)	●
YBI Transition Structures (YBITS)		299.3	(93.0)	206.3	12.3	238.4	32.1	●
YBITS 1	Construction			144.0	12.3	164.3	20.3	●
YBITS 2	Design			59.0	-	70.8	11.8	●
YBITS Landscaping	Design			3.3	-	3.3	-	●
Oakland Touchdown (OTD)		283.8	4.2	288.0	208.7	282.1	(5.9)	●
OTD 1	Completed			212.0	200.8	208.9	(3.1)	●
OTD 2	Design			62.0	-	59.2	(2.8)	●
OTD Electrical Systems	Design			4.4	-	4.4	-	●
Submerged Electric Cable	Completed			9.6	7.9	9.6	-	●
Existing Bridge Demolition	Design	239.2	(0.1)	239.1	-	233.0	(6.1)	●
Stormwater Treatment Measures	Completed	15.0	3.3	18.3	16.7	18.3	-	●
Other Completed Contracts	Completed	90.4	-	90.4	89.8	90.4	-	●
Capital Outlay Support		959.3	203.0	1,162.3	858.0	1,272.2	109.9	●
Right-of-Way and Environmental Mitigation		72.4	-	72.4	51.3	72.4	-	●
Other Budgeted Capital		35.1	(3.3)	31.8	0.7	7.7	(24.1)	●
<b>Total SFOBB East Span Replacement</b>		<b>5,486.6</b>	<b>403.5</b>	<b>5,890.1</b>	<b>4,256.0</b>	<b>6,285.7</b>	<b>395.6</b>	
<b>Antioch Bridge Seismic Retrofit</b>								
Capital Outlay Construction and Mitigation	Construction		70.0	70.0	-	62.5	(7.5)	●
Capital Outlay Support			31.0	31.0	15.8	35.5	4.5	●
<b>Total Antioch Bridge Seismic Retrofit</b>		<b>-</b>	<b>101.0</b>	<b>101.0</b>	<b>15.8</b>	<b>98.0</b>	<b>(3.0)</b>	
<b>Dumbarton Bridge Seismic Retrofit</b>								
Capital Outlay Construction and Mitigation	Awarded		270.0	270.0	0.3	92.7	(177.3)	●
Capital Outlay Support			95.0	95.0	21.9	56.0	(39.0)	●
<b>Total Dumbarton Bridge Seismic Retrofit</b>		<b>-</b>	<b>365.0</b>	<b>365.0</b>	<b>22.2</b>	<b>148.7</b>	<b>(216.3)</b>	
Other Program Projects		2,268.4	(64.6)	2,203.8	2,158.5	2,191.7	(12.1)	●
Miscellaneous Program Costs		30.0	-	30.0	25.5	30.0	-	●
Net Programmatic Risks*		-	-	-	-	202.8	202.8	●
Program Contingency		900.0	(191.9)	708.1	-	341.1	(367.0)	●
<b>Total Toll Bridge Seismic Retrofit Program</b>		<b>8,685.0</b>	<b>613.0</b>	<b>9,298.0</b>	<b>6,478.0</b>	<b>9,298.0</b>	<b>-</b>	●

● Within approved schedule and budget

● Identified potential project risks that could significantly impact approved schedules and budgets if not mitigated

● Known project impacts with forthcoming changes to approved schedules and budgets

\*The Net Programmatic Risks of \$202.8 million is comprised of \$195.8 million program level risks and \$7 million risk reconciliation.

## Toll Bridge Seismic Retrofit Program Schedule Summary

	AB144/SB 66 Project Completion Schedule Baseline (July 2005)	TBPOC Approved Changes (Months)	Current TBPOC Approved Completed Schedule (August 2010)	Current Completion Forecast (August 2010)	Schedule Variance (Months)	Schedule Status	Remarks/Notes
	g	h	i=g+h	j	k=j-i	l	
<b>SFOBB East Span Seismic Replacement</b>							
<b>Contract Completion</b>							
Skyway	Apr 2007	8	Dec 2007	Dec 2007	-	●	See Page 28
SAS Marine Foundations	Jun 2008	(5)	Jan 2008	Jan 2008	-	●	See Page 18
SAS Superstructure	Mar 2012	12	Mar 2013	Oct 2013	7	●	See Page 19
YBI Detour	Jul 2007	41	Dec 2010	Dec 2010	-	●	See Page 15
YBI Transition Structures (YBITS)	Nov 2013	12	Nov 2014	Mar 2015	4		See Page 16
YBITS 1			Sep 2013	Dec 2013	3	●	
YBITS 2			Nov 2014	Mar 2015	4	●	
YBITS Landscaping			TBD	TBD	-	●	
Oakland Touchdown	Nov 2013	12	Nov 2014	Mar 2015	4		See Page 29
OTD 1			Jun 2010	June 2010	-	●	
OTD 2			Nov 2014	Mar 2015	4	●	
OTD Electrical Systems			TBD	TBD	-	●	
Submerged Electric Cable			Jan 2008	Jan 2008	-	●	
Existing Bridge Demolition	Sep 2014	12	Sep 2015	Dec 2015	3	●	
Stormwater Treatment Measures	Mar 2008	-	Mar 2008	Mar 2008	-	●	
<b>SFOBB East Span Bridge Opening and Other Milestones</b>							
OTD Westbound Access			Aug 2009	Aug 2009	-	●	
YBI Detour Open			Sep 2009	Sep 2009	-	●	See Page 15
Westbound Open	Sep 2011	12	Sep 2012	April 2013	7	●	
Eastbound Open	Sep 2012	12	Sep 2013	Dec 2013	3	●	
<b>Antioch Bridge Seismic Retrofit</b>							
Contract Completion			Aug 2012	May 2012	(3)	●	See Page 32
<b>Dumbarton Bridge Seismic Retrofit</b>							
Contract Completion			Sep 2013	Sep 2013	-	●	See Page 34

Notes: 1) Figures may not sum up to totals due to rounding effects.

2) TBSRP Forecasts for the Monthly Reports are generally updated on a quarterly basis in conjunction with quarterly risk analysis assessments for the TBSRP Projects.

## Regional Measure 1 Program Cost Summary

	Contract Status	BATA Baseline Budget (July 2005)	BATA Approved Changes	Current BATA Approved Budget (August 2010)	Cost to Date (June 2010)	Current Cost Forecast (August 2010)	Cost Variance	Cost Status
		a	b	c = a + b	d	e	f = e - c	
<b>Interstate 880/Route 92 Interchange Reconstruction</b>								
Capital Outlay Construction	Construction	94.8	66.2	161.0	100.3	161.0	-	●
Capital Outlay Support		28.8	34.6	63.4	54.1	63.4	-	●
Capital Outlay Right-of-Way		9.9	7.0	16.9	12.3	16.9	-	●
Project Reserve		0.3	3.4	3.7	-	3.7	-	
<b>Total I-880/SR-92 Interchange Reconstruction</b>		<b>133.8</b>	<b>111.2</b>	<b>245.0</b>	<b>166.7</b>	<b>245.0</b>	-	
<b>Other Completed Program Projects</b>		<b>1,978.8</b>	<b>182.6</b>	<b>2,161.4</b>	<b>2,086.8</b>	<b>2,161.4</b>	-	
<b>Total Regional Measure 1 Toll Bridge Program</b>		<b>2,112.6</b>	<b>293.8</b>	<b>2,406.4</b>	<b>2,253.5</b>	<b>2,406.4</b>	-	

\*Due to the implementation of the new Accounting system, the expenditure report through August 31, 2010 is not available to be published in the September 2010 Monthly

- Within approved schedule and budget
- Identified potential project risks that could significantly impact approved schedules and budgets if not mitigated
- Known project impacts with forthcoming changes to approved schedules and budgets

## Regional Measure 1 Program Schedule Summary

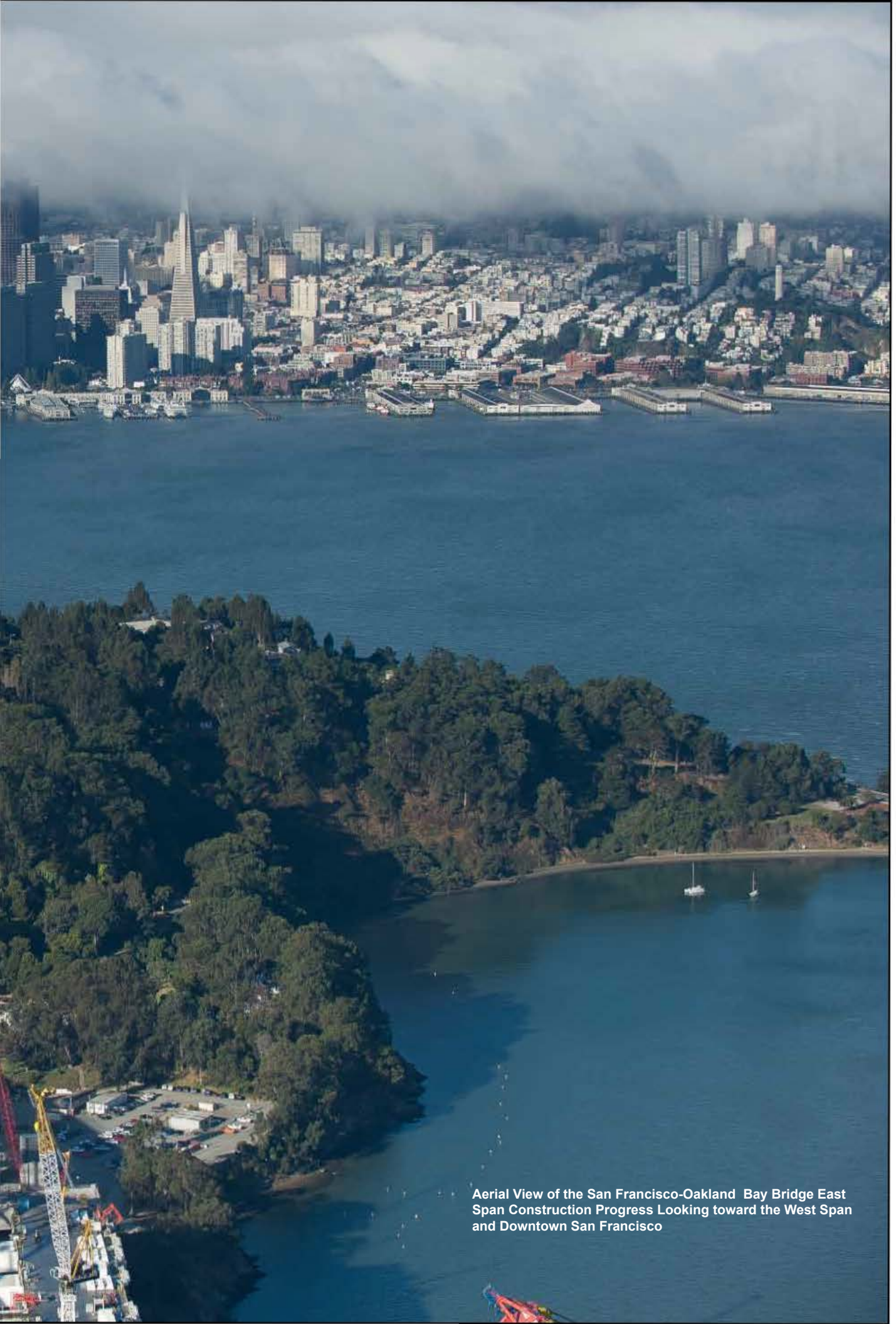
	BATA Baseline Completion Schedule (July 2005)	BATA Approved Changes (Months)	Current BATA Approved Completion Schedule (August 2010)	Current Completion Forecast (August 2010)	Schedule Variance (Months)	Schedule Status	Remarks/Notes
	g	h	i = g + h	j	k = j - i	l	
<a href="#">Interstate 880/Route 92 Interchange Reconstruction</a>							
Contract Completion							
Interchange Reconstruction	Dec 2010	9	Jun 2011	Sep 2011	3	●	See Page 40

Note: 1) Figures may not sum up to totals due to rounding effects.









Aerial View of the San Francisco-Oakland Bay Bridge East Span Construction Progress Looking toward the West Span and Downtown San Francisco

# **TOLL BRIDGE SEISMIC RETROFIT PROGRAM**



## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge Seismic Retrofit Strategy

When a 250-ton section of the upper deck of the East Span collapsed during the 7.1-magnitude Loma Prieta Earthquake in 1989, it was a wake-up call for the entire Bay Area. While the East Span quickly reopened within a month, critical questions lingered: How could the Bay Bridge—a vital regional lifeline structure—be strengthened to withstand the next major earthquake? Seismic experts from around the world determined that to make each separate element seismically safe on a bridge of this size, the work must be divided into numerous projects. Each project presents unique challenges. Yet there is one common challenge — the need to accommodate the more than 280,000 vehicles that cross the bridge each day.



West Approach Overview

#### West Approach Seismic Replacement Project

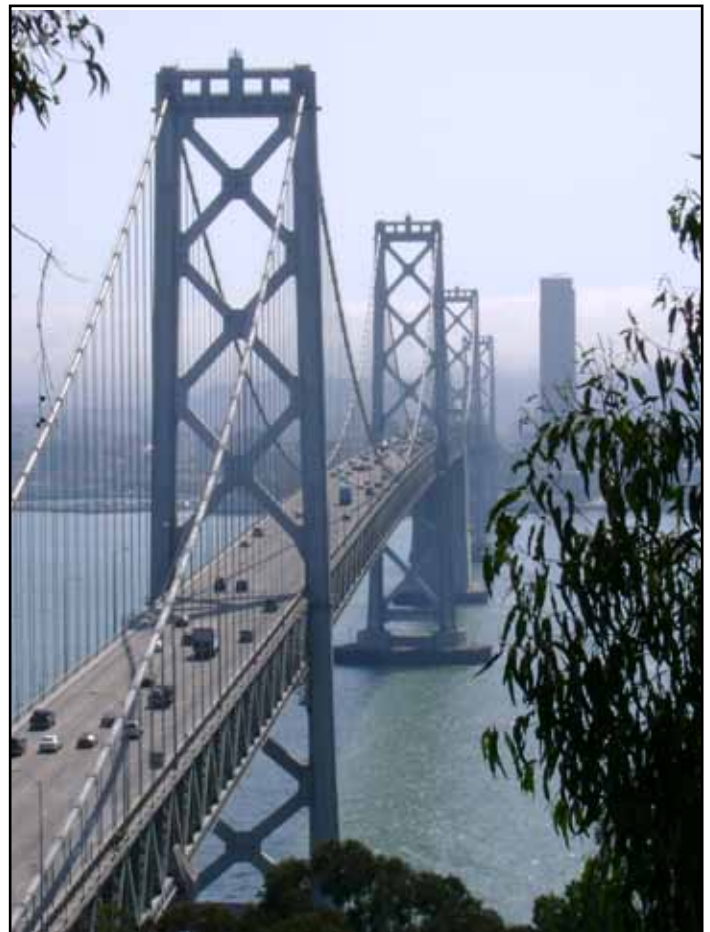
**Project Status: Completed 2009**

Seismic safety retrofit work on the West Approach in San Francisco—bounded on the west by 5th Street and on the east by the anchorage of the west span at Beale Street—involved completely removing and replacing this one-mile stretch of Interstate 80, as well as six on- and off-ramps within the confines of the West Approach's original footprint. This project was completed on April 8, 2009.

#### West Span Seismic Retrofit Project

**Project Status: Completed 2004**

The West Span lies between Yerba Buena Island and San Francisco and is made up of two complete suspension spans connected at a center anchorage. Retrofit work included adding massive amounts of steel and concrete to strengthen the entire West Span, along with new seismic shock absorbers and bracing.



San Francisco-Oakland Bay Bridge West Span



## East Span Seismic Replacement Project

Rather than a seismic retrofit, the two-mile long East Span is being completely rebuilt. When completed, the new East Span will consist of several different sections, but will appear as a single streamlined span. The eastbound and westbound lanes of the East Span will no longer include upper and lower decks. The lanes will instead be parallel, providing motorists with expansive views of the bay. These views will also be enjoyed by bicyclists and pedestrians, thanks to a new path on the south side of the bridge that will extend all the way to Yerba Buena Island. The new span will be aligned north of the existing bridge to allow traffic to continue to flow on the existing bridge as crews build the new span.

The new span will feature the world's longest Self-Anchored Suspension (SAS) bridge that will be connected to an elegant roadway supported by piers (Skyway), which will gradually slope down toward the Oakland shoreline (Oakland Touchdown). A new transition structure on Yerba Buena Island (YBI) will connect the SAS to the YBI Tunnel and will transition the East Span's side-by-side traffic to the upper and lower decks of the tunnel and West Span.

When construction of the new East Span is complete and vehicles have been safely rerouted to it, the original East Span will be demolished.



Architectural Rendering of the New East Span of the San Francisco-Oakland Bay Bridge



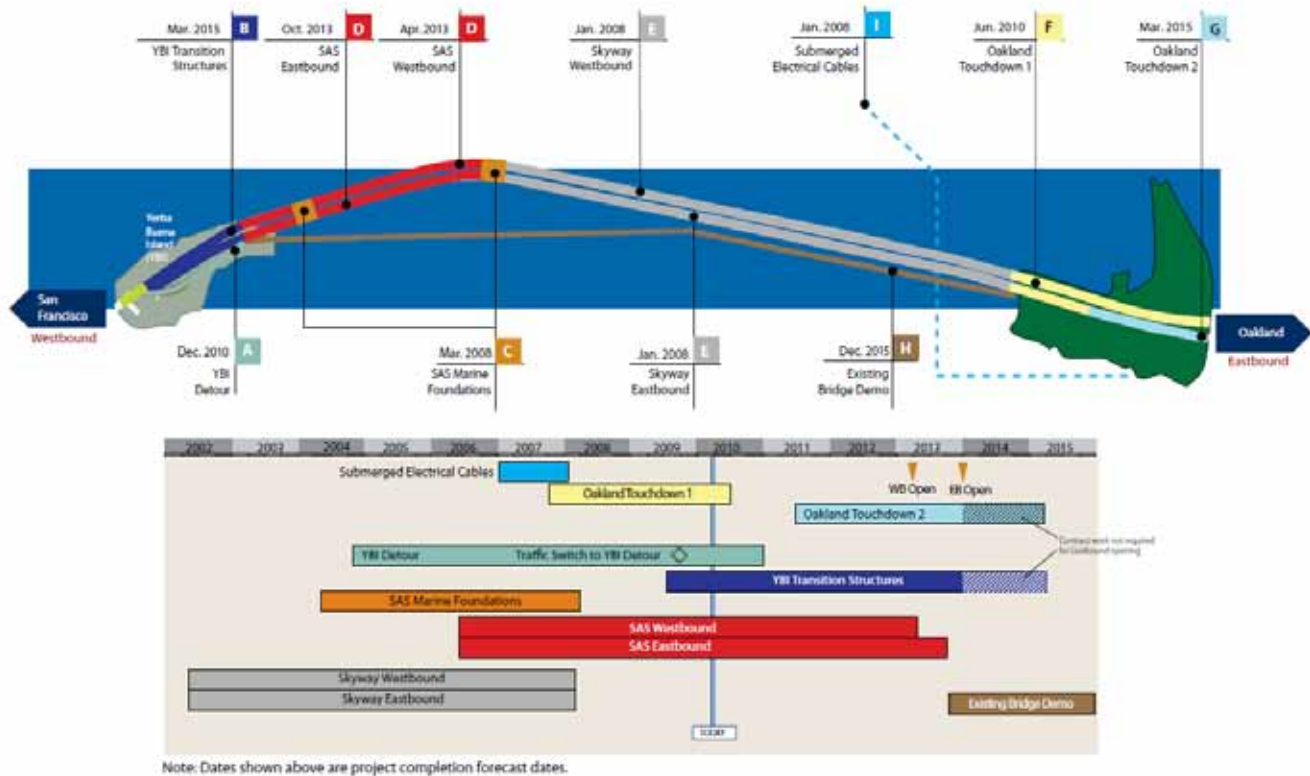
## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Summary

The new East Span bridge can be split into four major components—the Skyway and the Self-Anchored Suspension bridge in the middle and the Yerba Buena Island Transition Structures and Oakland Touchdown approaches at either end. Each component is being constructed by one to three separate contracts that have been sequenced together.

Highlighted below are the major East Span contracts and their schedules. The letter designation before each contract corresponds to contract descriptions in the report.

#### SFOBB East Span Work Sequence





## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Yerba Buena Island Detour (YBID)

As with all of the Bay Bridge's seismic retrofit projects, crews must build the Yerba Buena Island Transition Structures (YBITS) without disrupting traffic. To accomplish this task, YBID eastbound and westbound traffic was shifted off the existing roadway and onto a temporary detour on Labor Day weekend 2009. Drivers will use this detour, just south of the original roadway, until traffic is moved onto the new East Span.

#### A YBID Contract

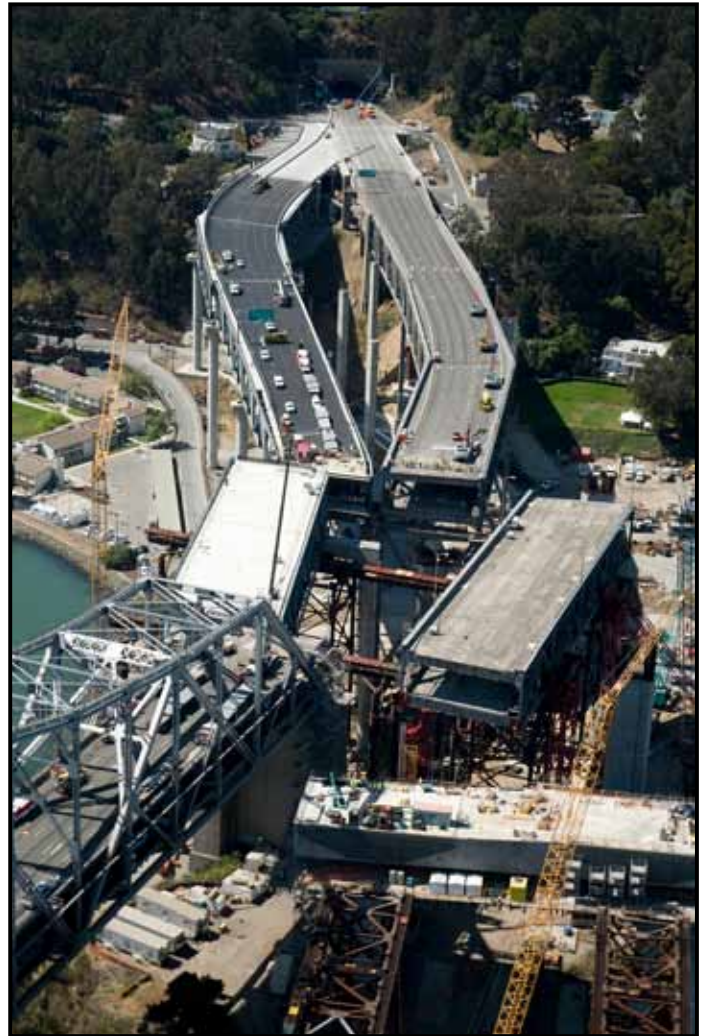
Contractor: C.C. Myers Inc

Approved Capital Outlay Budget: \$492.8 M

Status: 99% Complete as of August 2010

This contract was originally awarded in early 2004 to construct the detour structure for the planned 2006 opening of the new East Span. Due to the re-advertisement of the SAS superstructure contract in 2005 because of a lack of funding at the time, the bridge opening was rescheduled to 2013. To better integrate the contract into the current East Span schedule and to improve seismic safety and mitigate future construction risks, the TBPOC has approved a number of changes to the contract, including adding the deck replacement work near the tunnel that was rolled into place over Labor Day weekend 2007, advancing future transition structure foundation work and making design enhancements to the temporary detour structure. These changes have increased the budget and forecast for the contract to cover the revised project scope and potential project risks.

**Status:** Work is completed on the demolition of the old approach span and construction continues on a number of accelerated foundations for the future transition structures from the Self-Anchored Suspension (SAS) bridge to the tunnel. Upon removal of the old approach span and completion of future accelerated transition structure columns, the area will be turned over to the Yerba Buena Island Transition Structures (YBITS) #1 contractor that will construct the new approach structures. The YBITS #1 contractor, MCM, has mobilized and is moving in equipment and storing trestle work.



YBI East Tie In Rolled In Labor Day 2009



West Tie-In Phase #1 Rolled in on Labor Day 2007

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Yerba Buena Island Transition Structures (YBITS)

The new Yerba Buena Island Transition Structures (YBITS) will connect the new SAS bridge span to the existing Yerba Buena Island Tunnel, transitioning the new side-by-side roadway decks to the upper and lower decks of the tunnel. The new structures will be cast-in-place reinforced concrete structures that will look very similar to the already constructed Skyway structures. While some YBITS foundations and columns have been advanced by the YBID contract, the remaining work will be completed under three separate YBITS contracts.

#### **B** YBITS #1 Contract

Contractor: MCM Construction, Inc.

Approved Capital Outlay Budget: \$144.0 M

Status: 2% Complete as of August 2010



Overview of YBITS Advanced Columns, YBID and SAS W2 Cap Beam

The YBITS #1 contract will construct the mainline roadway structures from the SAS bridge to the YBI tunnel. On December 15, 2009, Caltrans opened three bids for the Yerba Buena Island Transitions Structures (YBITS) #1 contract. On February 4, 2010, Caltrans awarded the YBITS #1 Contract to MCM Construction, Inc. Construction work will start when the YBID contractor has completed demolition of the old viaduct structure and [advanced columns](#). MCM Construction, Inc. is also the firm that constructed the Oakland Touchdown #1 contract.

Status: MCM Construction, Inc. has mobilized and will start construction in September 2010.



Rendering of Overview of Future Yerba Buena Island Transition Structures (top) in Progress with Detour Viaduct (bottom) Completed





## YBITS #2 Contract

Contractor: TBD

Approved Capital Outlay Budget: \$59.0 M

Status: **In Design**

The YBITS #2 contract will demolish the detour viaduct after all traffic is shifted to the new bridge and will construct a new eastbound on-ramp to the bridge in its place. The new ramp will also provide the final link for bicycle/pedestrian access off the SAS bridge onto Yerba Buena Island.

## YBITS Landscaping Contract

Contractor: TBD

Approved Capital Outlay Budget \$3.3M

Status: **In Design**

Upon completion of the YBITS work, a follow-on landscaping contract will be executed to re-plant and landscape the area.

## Yerba Buena Island Transition Structures Advanced Work

Due to the re-advertisement of the SAS superstructure contract in 2005, it became necessary to temporarily suspend the detour contract and make design changes to the viaduct. To make more effective use of the extended contract duration and to reduce overall project schedule and construction risks, the TBPOC approved the advancement of foundation and column work from the Yerba Buena Island Transition Structures contract.

**Status:** Work continues to complete the advanced columns for the Yerba Buena Island Transition Structures by the end of September 2010.



Aerial View of Yerba Buena Island Transition Structures Advanced Columns ,YBITS and SAS Roadway Boxes

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Self-Anchored Suspension (SAS) Bridge

If one single element bestows world class status on the new Bay Bridge East Span, it is the Self-Anchored Suspension (SAS) bridge. This engineering marvel will be the world's largest SAS span at 2,047 feet in length, as well as the first bridge of its kind built with a single tower.

The SAS was separated into three separate contracts— construction of the land-based foundations and columns at Pier W2; construction of the marine-based foundations and columns at Piers T1 and E2; and construction of the SAS steel superstructure, including the tower, roadway, and cabling. Construction of the foundations at Pier W2 and at Piers T1 and E2 was completed in 2004 and 2007, respectively.



SAS Tower Lift 1 Shafts Being Erected

### SAS Land Foundation Contract

Contractor: West Bay Builders, Inc.

Approved Capital Outlay Budget: \$26.4 M

Status: Completed October 2004

The twin W2 columns on Yerba Buena Island provide essential support for the western end of the SAS bridge, where the single main cable for the suspension span will extend down from the tower and wrap around and under the western end of the roadway deck. Each of these huge columns required massive amounts of concrete and steel and are anchored 80 feet into the island's solid bedrock.

### C SAS Marine Foundations Contract

Contractor: Kiewit/FCI/Manson, Joint Venture

Approved Capital Outlay Budget: \$280.9 M

Status: Completed January 2008

Construction of the piers at E2 and T1 required significant on-water resources to drive the foundation support piles down, not only to bedrock, but also through the bay water and mud (see rendering on facing page).

The T1 foundation piles extend 196 feet below the waterline and are anchored into bedrock with heavily reinforced concrete rock sockets that are drilled into the rock. Driven nearly 340 feet deep, the steel and concrete E2 foundation piles were driven 100 feet deeper than the deepest timber piles of the existing east span in order to get through the bay mud and reach solid bedrock.



## D SAS Superstructure Contract

Contractor: American Bridge/Fluor Enterprises, Joint Venture

Approved Capital Outlay Budget: \$1.75 B

Status: **57% Complete as of August 2010**

The SAS bridge is not just another suspension bridge. Rising 525 feet above mean sea level and embedded in rock, the single-tower SAS span is designed to withstand a massive earthquake. Traditional main cable suspension bridges have twin cables with smaller suspender cables connected to them. These cables hold up the roadbed and are anchored to the east end of the roadway boxes. While there will appear to be two main cables on the SAS, there will actually only be one. This single cable will be anchored within the eastern end of the roadway, carried over the tower and then wrapped around the two side-by-side decks at the western end.

The single-steel tower will be made up of four separate legs connected by shear link beams which function much like a fuse in an electrical circuit. These beams will absorb most of the impact from an earthquake, preventing damage to the tower legs.

The next several pages highlight the construction sequence of the SAS and are followed by detailed updates on specific construction activities.



Architectural Rendering of New Self-Anchored Suspension Span and Skyway





## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### *Self-Anchored Suspension (SAS) Construction Sequence*

#### STEP 1 - CONSTRUCT TEMPORARY SUPPORT STRUCTURES

Temporary support structures will need to be erected from the Skyway to Yerba Buena Island to support the new SAS bridge during construction.

**Status:** Foundations and temporary support structures **will be** completed in mid-September 2010 with the last westbound mid-section erection.



#### STEP 2 - INSTALL ROADWAYS

The roadway boxes are being lifted into place by using the shear-leg crane barge. The boxes are being bolted and welded together atop the temporary support trusses to form two continuous parallel steel roadway boxes.

**Status:** Westbound roadway boxes 7 and 8 **will be erected in September 2010**. Seven crossbeams have been erected between the roadway boxes. Roadway boxes 9 east and west **will ship on September 18, 2010** and are expected to arrive at Pier 7 in Oakland in mid-October 2010.



#### STEP 3 - INSTALL TOWER

Each of the four legs of the tower will be erected in five separate lifts. The tower lifts will be installed using a temporary erection tower and lifting jacks.

**Status:** The first lift tower shafts arrived at Pier 7 in Oakland on July 18, 2010 and erected on August 6, 2010. The second tower lift will ship on September 18, 2010 and is expected to arrive at Pier 7 in Oakland in October 10, 2010.



#### STEP 4 - MAIN CABLE AND SUSPENDER INSTALLATION

The main cable will be pulled from the east end of the SAS bridge, over the tower, and wrapped around Pier W2 and again back over the tower and to the west end of the SAS bridge deck. Suspender cables will be added to lift the roadway decks off the temporary support structure.

**Status:** Cable installation is pending the erection of the tower and roadway spans. All cables have been fabricated, shipped and stored in the warehouse at Pier 7 in Oakland.



#### STEP 5 - WESTBOUND OPENING

The new bridge will first open in the westbound direction pending completion of the Yerba Buena Island Transition Structures.

**Status:** Westbound opening is forecast for fall 2013. The westbound approach from Oakland to the Skyway was completed by the Oakland Touchdown #1 contract in June 2009.



#### STEP 6 - EASTBOUND OPENING

Opening of the bridge in the eastbound direction is pending completion of Oakland Touchdown #2. Discussions are underway to expedite the bridge opening by constructing a detour and completing the remaining portion of OTD #2 early.

**Status:** The eastbound opening is forecast for October 2013.



## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### *Self-Anchored Suspension (SAS) Superstructure Fabrication Activities*

#### **Roadway and Tower Segments**

Like giant three-dimensional jigsaw puzzles, the roadway and tower lifts of the SAS bridge are hollow steel shells that are internally strengthened and stiffened by a highly engineered network of welded steel ribs and diaphragms. The use of steel in this manner allows for a flexible yet relatively light and strong structure able to withstand the massive loads placed on the bridge during seismic events.

On the critical path to completing the bridge are the fabrication of the last four roadway boxes (segments 13 and 14 east and west). Start of fabrication of these boxes has fallen behind schedule due to delays in the fabrication drawing preparation process. These delays will likely preclude the westbound opening of the bridge in 2012, but the push for the opening of the bridge to traffic in both directions in 2013 continues.

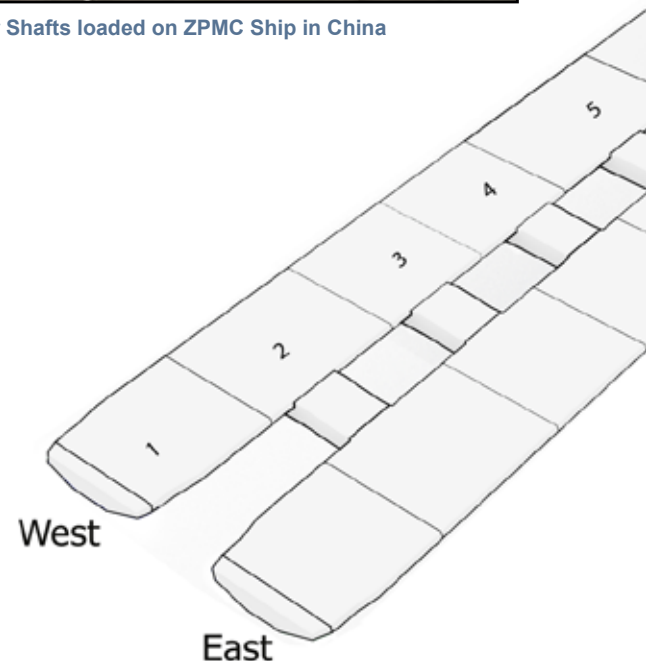
All components undergo a rigorous quality review by ZPMC, ABF, and Caltrans to ensure that only bridge components that have been built according to contract specifications will be shipped.

**Roadway Box Fabrication Status:** As shown in the diagram to the right, roadway boxes 1 through 8 east and west have been completed and shipped to the Bay Area. Roadway Box 9 east and west will be shipped on September 18, 2010 and is expected to arrive at Pier 7 in Oakland in on October 10, 2010. The remaining roadway boxes are still being pieced together into larger segments. Fabrication of sub-assemblies for roadway box 13 and 14 started in late March 2010.

**Tower Fabrication Status:** Each of the four legs of the towers is composed of five separate lifts. The lifts get progressively shorter and lighter as they progress up the tower. The first four shafts of the first lift of the tower were lifted into place and are being bolted and welded together. Tower lift 2 shaft will be shipped to the job site on September 18, 2010 and is expected to arrive at Pier 7 in Oakland on October 19, 2010. Tower lifts 3 and 4 shafts are in vertical assembly to ensure alignment at the ZPMC assembly yard.



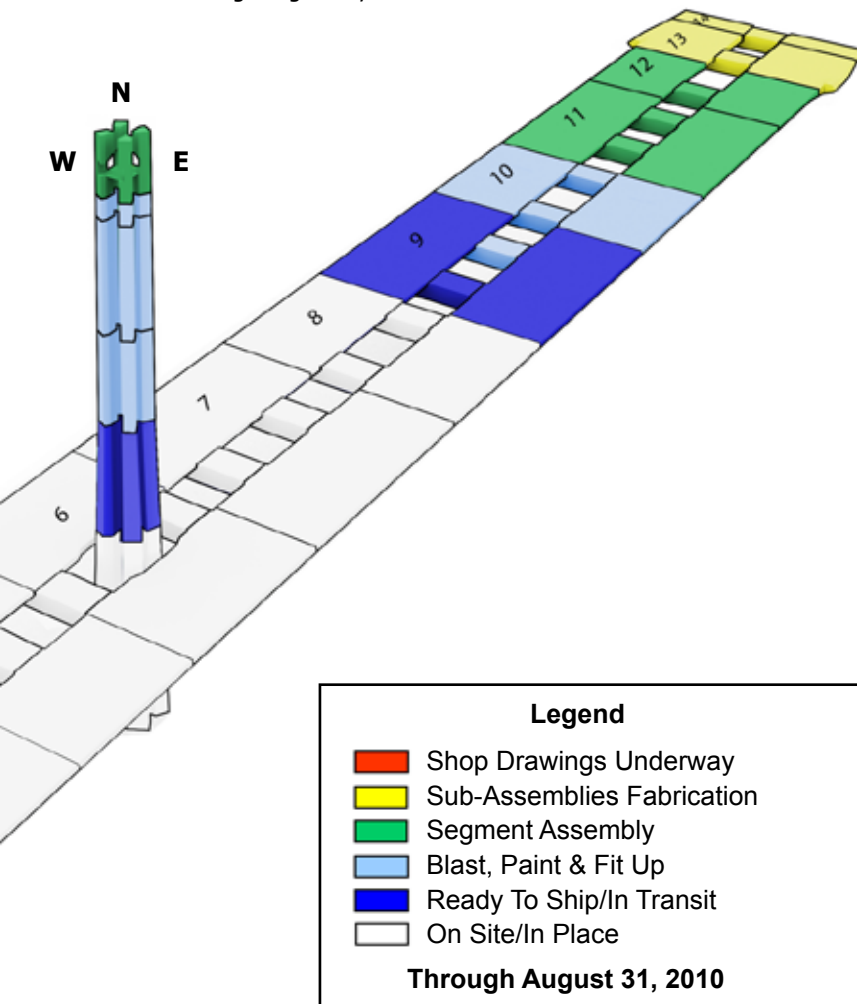
Lift 2 Tower Shafts loaded on ZPMC Ship in China





## Fabrication Progress Diagram

Through August 31, 2010



SAS Roadway Box 10 in Trial Assembly at the ZPMC Assembly Yard



SAS Roadway Box 9 Being Loaded for Shipment at ZPMC



Tower Lift 4 Shafts in Trial Assembly with Lift 3 Shafts at the ZPMC Assembly Yard Trial

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### *Self-Anchored Suspension (SAS) Superstructure Fabrication Activities (cont.)*

#### **Cables and Suspenders**

One continuous main cable will be used to support the roadway deck of the SAS bridge. Anchored into the eastern end of the bridge, the main cable will be anchored with the roadway box at the east end of the SAS near Pier E1, extend over the main tower at T1, loop around the western end of the roadway decks at Pier W2, and then travel back over the main tower to the western end of the roadway box. The main cable will be made up of bundles of individual wire strands. Supporting the roadway decks to the main cable will be a number of smaller suspender cables. The main cable will be fabricated in China and the suspender cables in Missouri, USA.



SAS Wire for Suspender Ropes

**Status:** All tower cables have been fabricated and delivered to the job site and stored at Pier 7 warehouse in Oakland. Of 204 suspenders, 94 are complete 34 cable bands have arrived at the job site. Cable band bolts are complete and are ready for final testing in late September 2010.

#### **Saddles, Bearings, Hinges, and Other Bridge Components**

The mounts on which the main cable and suspender ropes will sit are made from solid steel castings. Castings for the main cable saddles are being made by Japan Steel Works, while the cable bands and brackets are being made by Goodwin Steel in the United Kingdom.

The bridge bearings and hinges that support, connect, and transfer loads from the self-anchored suspension (SAS) span to the adjoining sections of the new east span are being fabricated in a number of locations. Work on the bearings is being performed in Pennsylvania, USA and Hochang, South Korea, while hinge pipe beams are being fabricated in Oregon, USA.



SAS East End Diaphragm Connection Fabrication

**Status:** The cable saddles and hinges at the W2 cap beam and YBITS are under fabrication. The west deviation saddles arrived at Pier 7 in San Francisco on April 15, 2010. All other saddles are completed and are being stored at the job site.



## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### *Self-Anchored Suspension (SAS) Superstructure Field Activities*



Shear-Leg Crane Barge Installing the Last Temporary Support Structure Truss



SAS Aerial View of Last Temporary Support Structure Truss Being Erected



SAS E2 Cap Beam and the end of the Skyway

#### ***Shear-Leg Crane Barge***

The massive shear-leg barge crane that is helping to build the SAS superstructure arrived in the San Francisco Bay on March 12, 2009 after a trans-Pacific voyage.

The crane and barge are separate units operating as a single entity named the “Left Coast Lifter.” The 400-by-100-foot barge is a U.S.-flagged vessel that was custom built in Portland, Oregon by U.S. Barge, LLC and outfitted with the crane by Shanghai Zhenhua Heavy Industry Co. Ltd. (ZPMC) at a facility near Shanghai, China. The crane’s boom weighs 992 tons and is 328 feet long. The crane can lift up to 1,873 tons, including the deck and tower boxes for the SAS.

**Status:** The shear-leg crane barge arrived at the job site March 2009. The crane has off-loaded and placed all temporary support structures and SAS roadway boxes and crossbeams.

#### ***Temporary Support Structures***

To erect the roadway decks and tower of the bridge, temporary support structures were first put in place. Almost a bridge in itself, the temporary support structures stretch from the end of the completed Skyway back to Yerba Buena Island. For the tower, a strand jack system is being built into the tower’s temporary frame to elevate the upper sections of the tower into place. These temporary supports are being fabricated in the Bay Area, as well as in Oregon and in China at ZPMC.

**Status:** The temporary support structures are complete. A mid-section of the westbound truss was erected in mid-September after the SAS roadway boxes 7 and 8 eastbound were lifted into place.

#### ***Cap Beams***

Construction of the massive steel-reinforced concrete cap beams that link the columns at Piers W2 and E2 was left to the SAS superstructure contractor and represents the only concrete portions of work on that contract. The east and west ends of the SAS roadway will rest on the cap beams and the main cable will wrap around Pier W2, while anchoring into the east end of the SAS deck sections near E2.

**Status:** Completed March 2009



## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### *Self-Anchored Suspension (SAS) Superstructure Installation Activities*

Upon arrival in Oakland, the steel roadway and tower sections are off-loaded directly from the transport ship onto barges to await installation atop the temporary support structures. Steel roadway boxes will be installed from west to east. Due to the shallow waters near Yerba Buena Island, the eastbound lanes on the south side of the new bridge will be installed first, then to be followed by the westbound lanes. In total, there are 28 roadway boxes (14 in each direction) that range from 560 to 1660 tons and from 80 to 230 feet long.

The tower comprises four legs, each made up of four tower lifts that make up the majority of the height of the tower, the tower grillage, and finally the tower head.

**Status:** Fourteen of 28 roadway boxes (1 through 8 east and west) have been placed on top of temporary support structures and two additional roadway boxes will be lifted into place in September to form a continuous roadway. Tower lift 1 shafts have been lifted into place and are being welded and bolted together. Roadway box 9 east and west and tower lift 2 shafts will be shipped on September 18, 2010 and are expected to arrive at Pier 7 in Oakland on October 10, 2010.





Aerial View of the Shear-Leg Crane Barge Erecting the Last Section of the Westbound Temporary Support Structure Truss



Aerial View of the Shear-Leg Crane Barge Erecting the Last Section of the Westbound Temporary Support Structure Truss



## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Skyway

The Skyway, which comprises much of the new East Span, will drastically change the appearance of the Bay Bridge. Replacing the gray steel that currently cages drivers, a graceful, elevated roadway supported by piers will provide sweeping views of the bay.

#### **E** Skyway Contract

Contractor: Kiewit/FCI/Manson, Joint Venture

Approved Capital Outlay Budget: \$1.25 B

Status: Completed March 2008

Extending for more than a mile across Oakland mudflats, the Skyway is the longest section of the East Span. It sits between the new Self-Anchored Suspension (SAS) span and the Oakland Touchdown. In addition to incorporating the latest seismic-safety technology, the side-by-side roadway decks of the Skyway feature shoulders and lane widths built to modern standards.

The Skyway's decks are composed of 452 pre-cast concrete segments (standing three stories high), containing approximately 200 million pounds of structural steel, 120 million pounds of reinforcing steel, 200 thousand linear feet of piling and about 450 thousand cubic yards of concrete. These are the largest segments of their kind ever cast and were lifted into place by custom-made winches.

The Skyway marine foundation consists of 160 hollow steel pipe piles measuring eight feet in diameter and dispersed among 14 sets of piers. The 365-ton piles were driven more than 300 feet into the deep bay mud. The new East Span piles were battered or driven in at an angle, rather than vertically, to obtain maximum strength and resistance.

Designed specifically to move during a major earthquake, the Skyway features several state-of-the-art seismic safety innovations, including 60-foot-long hinge pipe beams. These beams will allow deck segments on the Skyway to move, enabling the deck to withstand greater motion and to absorb more earthquake energy.



Overview of the Skyway Looking West Toward Yerba Buena Island



## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Oakland Touchdown

When completed, the Oakland Touchdown (OTD) structures will connect Interstate 80 in Oakland to the new side-by-side decks of the new East Span. For westbound drivers, the OTD will be their introduction to the graceful new East Span. For eastbound drivers from San Francisco, this section of the bridge will carry them from the Skyway to the East Bay, offering unobstructed views of the Oakland hills.

The OTD will be constructed through two contracts. The first contract will build the new westbound lanes, as well as part of the eastbound lanes. The second contract to complete the eastbound lanes cannot fully begin until westbound traffic is shifted onto the new bridge. This enables a portion of the upper deck of the existing bridge to be demolished allowing for a smooth transition for the new eastbound lanes in Oakland.

#### **F** Oakland Touchdown #1 Contract

Contractor: MCM Construction, Inc.

Approved Capital Outlay Budget: \$212.0 M

Status: Completed June 2010

The OTD #1 contract constructs the entire 1,000-foot-long westbound approach from the toll plaza to the Skyway. When completed, the westbound approach structure will provide direct access to the westbound Skyway. In the eastbound direction, the contract will construct a portion of the eastbound structure and all of the eastbound foundations that are not in conflict with the existing bridge.

**Status:** MCM Construction, Inc. completed OTD #1 westbound and eastbound phase 1 on June 8, 2010.

#### **G** Oakland Touchdown #2 Contract

Contractor: TBD

Approved Capital Outlay Budget: \$62.0 M

Status: In Design

The OTD #2 contract will complete the eastbound approach structure from the end of the Skyway to Oakland. This work is critical to the eastbound opening of the new bridge, but cannot be completed until westbound traffic has been shifted off the existing upper deck to the new SAS bridge.



Aerial View of Oakland Touchdown Looking West

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Other Contracts

A number of contracts needed to relocate utilities, clear areas of archeological artifacts, and prepare areas for future work have already been completed. The last major contract will be the eventual demolition and removal of the existing bridge, which by that time will have served the Bay Area for nearly 80 years. Following is a status of some the other East Span contracts.

#### East Span Interim Seismic Retrofit

Contractors: 1) California Engineering  
2) Balfour Beatty

Approved Capital Outlay Budget: \$30.8 M

Status: Completed October 2000

After the 1989 Loma Prieta Earthquake, and before the final retrofit strategy was determined for the East Span, Caltrans completed an interim retrofit of the existing bridge to prevent a catastrophic collapse of the bridge should a similar earthquake occur before the East Span was completely replaced. The interim retrofit was performed under two separate contracts that lengthened pier seats, added some structural members, and strengthened areas of the bridge so they would be more resilient during an earthquake.

#### Stormwater Treatment Measures

Contractor: Diablo Construction, Inc.

Approved Capital Outlay Budget: \$18.3 M

Status: Completed December 2008

The Stormwater Treatment Measures contract implemented a number of best practices for the management and treatment of stormwater runoff. Focused on the areas around and approaching the toll plaza, the contract added new drainage and built new bio-retention swales and other related constructs.



Archeological Investigations



Existing East Span of the San Francisco-Oakland Bay Bridge



Stormwater Retention Basin



## Yerba Buena Island Substation

Contractor: West Bay Builders

Approved Capital Outlay Budget: \$11.6 M

Status: Completed May 2005

This contract relocated an electrical substation just east of the Yerba Buena Island Tunnel in preparation for the new East Span.

## Pile Installation Demonstration

Contractor: Manson and Dutra, Joint Venture

Approved Capital Outlay Budget: \$9.3 M

Status: Completed December 2000

While large-diameter battered piles are common in offshore drilling, the new East Span is one of the first bridges to use them in its foundations. To minimize project risks and build industry knowledge, a pile installation demonstration project was initiated to prove the efficacy of the proposed technology and methodology. The demonstration was highly successful and helped result in zero contract change orders or claims for pile driving on the project.

## H Existing Bridge Demolition

Contractor: TBD

Approved Capital Outlay Budget: \$239.1 M

Status: In Design

Design work on the contract will start in earnest as the opening of the new bridge to traffic approaches.



New YBI Electrical Substation

## I Electrical Cable Relocation

Contractor: Manson Construction

Approved Capital Outlay Budget: \$9.6 M

Status: Completed January 2008

A submerged cable from Oakland that is close to where the new bridge will touch down supplies electrical power to Treasure Island. To avoid any possible damage to the cable during construction, two new replacement cables were run from Oakland to Treasure Island. The extra cable was funded by the Treasure Island Development Authority.



## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### Antioch Bridge Seismic Retrofit Project

Contractor: California Engineering Contractors, Inc.

Approved Capital Outlay Budget: \$70.0 M

Status: 13% Complete as of August 2010

Serving the Delta region of the Bay Area, the Antioch Bridge takes State Route 160 traffic over the San Joaquin River, linking eastern Contra Costa County with Sacramento County. The current 1.8-mile-long steel plate girder bridge was opened in 1978 with one lane in each direction. The current retrofit strategy for the bridge includes relatively minor modifications to the approach structure on Sherman Island, the addition of isolation bearings and strengthening of the columns and hinge retrofits.

**Status:** The first working day of the project was July 13, 2010 and the contractor has completed building trestle #2 adjacent to State Route 160 and will begin with trestle #1 by July 27th. Work with the temporary roadway #2 at Sherman Island between Piers 22 and 38 is complete and 90 percent of the curtain wall has been removed at the slab span bridge. The remaining panels will be removed close to the end of the project.



Scaffolding for Bent Cap Retrofit is Hung from Existing Plate Girders

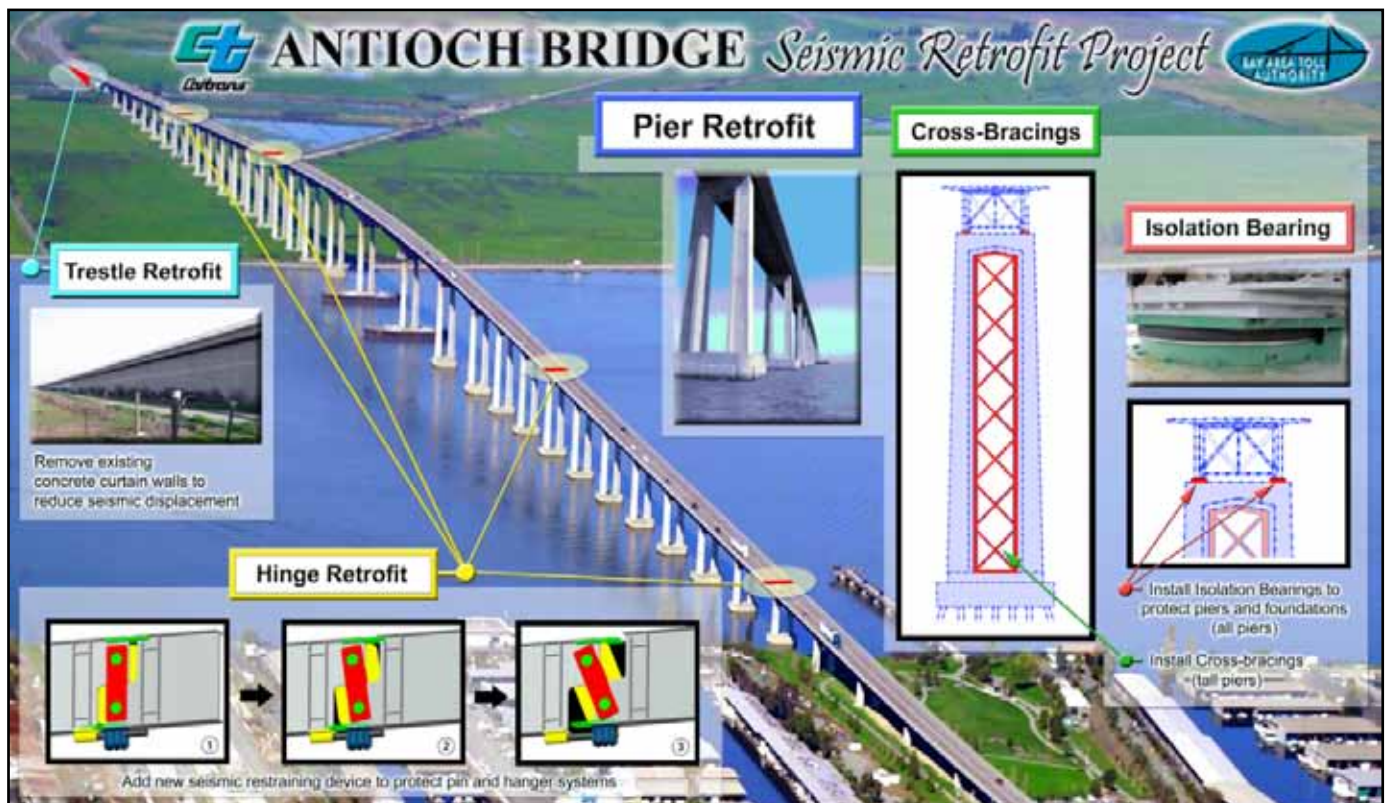


Diagram of Proposed Retrofit Work on the Antioch Bridge



Antioch Seismic Retrofit Project General Contractor, California Engineering Contractors, Inc.



View Looking toward Antioch, Main Spans



## Dumbarton Bridge Seismic Retrofit Project

Contractor: Shimmick Construction Company, Inc.

Approved Capital Outlay Budget: \$270.0 M

Status: Awarded

The current Dumbarton Bridge was opened to traffic in 1982 linking the cities of Newark in Alameda County and East Palo Alto in San Mateo County. The 1.6-mile long bridge has six lanes (three in each direction) and an eight-foot bicycle/pedestrian pathway. The bridge is a combination of reinforced concrete and steel girders that support a reinforced lightweight concrete roadway on reinforced concrete columns. The current retrofit strategy for the bridge includes superstructure and deck modifications and installation of isolation bearings.



Dumbarton Bridge

Status: On June 15, 2010, Caltrans opened seven bids for the Dumbarton Bridge Seismic Retrofit Project. The Dumbarton Retrofit Project had an engineer's estimate of \$73 million, which included supplemental work and contract contingencies, and included a maximum construction duration of 810 working days. The low bidder, Shimmick Construction Company, Inc. bid was substantially less at \$46.6 million. On September 2, 2010, the TBPOC will review the budgeting for the project. Given the low bid for project construction and

the current estimated support costs and project contingencies, it is proposed that the budget be revised to a total of \$267 million, which is \$216 million below the original estimate.

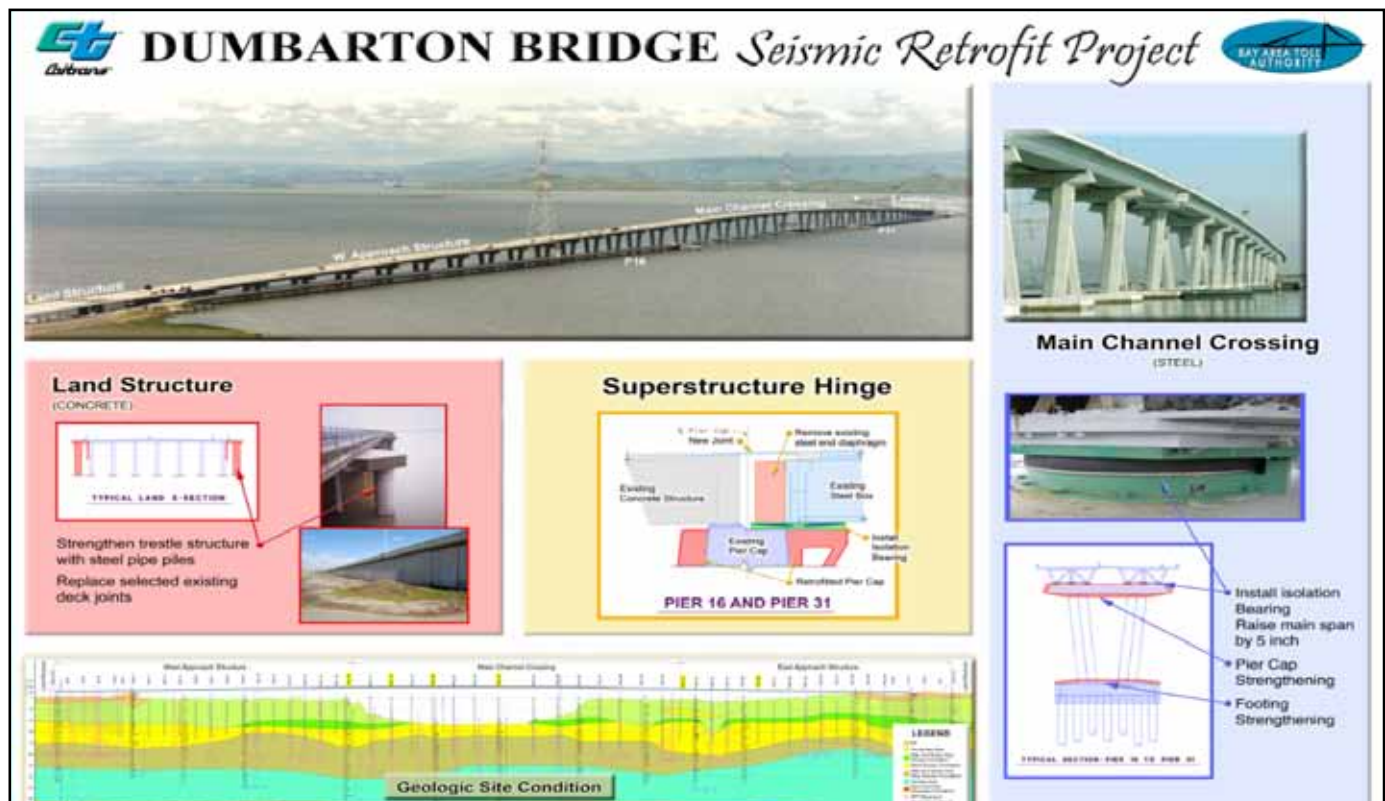


Diagram of Proposed Retrofit Work on the Dumbarton Bridge



Dumbarton Bridge



## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### Other Completed Projects

In the 1990s, the State Legislature identified seven of the nine state-owned toll bridges for seismic retrofit. In addition to the San Francisco-Oakland Bay Bridge, these included the Benicia-Martinez, Carquinez, Richmond-San Rafael and San Mateo-Hayward bridges in the Bay Area, and the Vincent Thomas and Coronado bridges in Southern California. Other than the East Span of the Bay Bridge, the retrofits of all of the bridges have been completed as planned.

#### San Mateo-Hayward Bridge Seismic Retrofit Project

**Project Status: Completed 2000**

The San Mateo-Hayward Bridge seismic retrofit project focused on strengthening the high-rise portion of the span. The foundations of the bridge were significantly upgraded with additional piles.



High-Rise Section of San Mateo-Hayward Bridge

#### 1958 Carquinez Bridge Seismic Retrofit Project

**Project Status: Completed 2002**

The eastbound 1958 Carquinez Bridge was retrofitted in 2002 with additional reinforcement of the cantilever thru-truss structure.

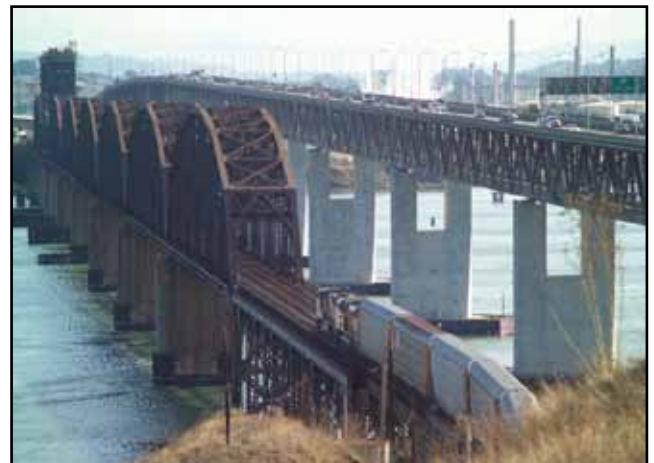


1958 Carquinez Bridge (foreground) with the 1927 Span (middle) under Demolition and the New Alfred Zampa Memorial Bridge (background)

#### 1962 Benicia-Martinez Bridge Seismic Retrofit Project

**Project Status: Completed 2003**

The southbound 1962 Benicia-Martinez Bridge was retrofitted to "Lifeline" status with the strengthening of the foundations and columns and the addition of seismic bearings that allow the bridge to move during a major seismic event. The Lifeline status means the bridge is designed to sustain minor to moderate damage after an event and to reopen quickly to emergency response traffic.



1962 Benicia-Martinez Bridge (right)

## Richmond-San Rafael Bridge Seismic Retrofit Project

**Project Status: Completed 2005**

The Richmond-San Rafael Bridge was retrofitted to a “No Collapse” classification to avoid catastrophic failure during a major seismic event. The foundations, columns, and truss of the bridge were strengthened, and the entire low-rise approach viaduct from Marin County was replaced.



Richmond-San Rafael Bridge

## Los Angeles-Vincent Thomas Bridge Seismic Retrofit Project

**Project Status: Completed 2000**

The Vincent Thomas Bridge is a 1,500-foot long suspension bridge crossing the Los Angeles Harbor in Los Angeles that links San Pedro with Terminal Island. The bridge was one of two state-owned toll bridges in Southern California (the other being the San Diego-Coronado Bridge). Opened in 1963, the bridge was seismically retrofitted as part of the TBSRP in 2000.



Los Angeles-Vincent Thomas Bridge

## San Diego-Coronado Bridge Seismic Retrofit Project

**Project Status: Completed 2002**

The San Diego-Coronado Bridge crosses over San Diego Bay and links the cities of San Diego and Coronado. Opened in 1969, the 2.1-mile long bridge was seismically retrofitted as part of the Toll Bridge Seismic Retrofit Project in 2002.

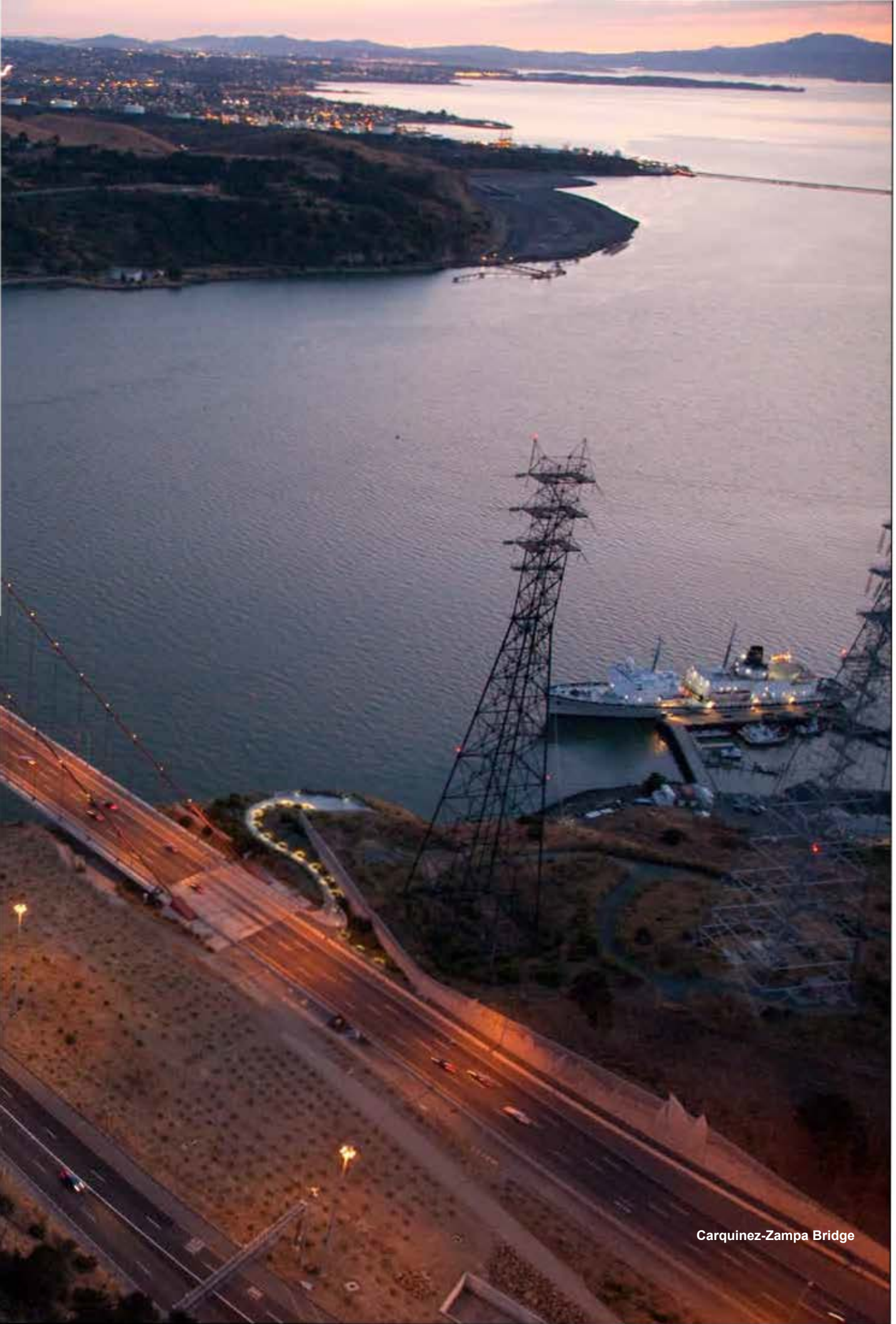


San Diego-Coronado Bridge









Carquinez-Zampa Bridge

## REGIONAL MEASURE 1 TOLL BRIDGE PROGRAM



## REGIONAL MEASURE 1 PROGRAM

### Interstate 880/State Route 92 Interchange Reconstruction Project

**Project Status: In Construction**

The Interstate 880/State Route 92 Interchange Reconstruction Project is the final project under the Regional Measure 1 Toll Bridge Program. Project completion fulfills a promise made to Bay Area voters in 1988 to deliver a slate of projects that help expand bridge capacity and improve safety on the bridges.

### Interstate 880/State Route 92 Interchange Reconstruction Contract

Contractor: Flatiron/Granite

Approved Capital Outlay Budget: \$158.0 M

Status: 74% Complete as of August 2010

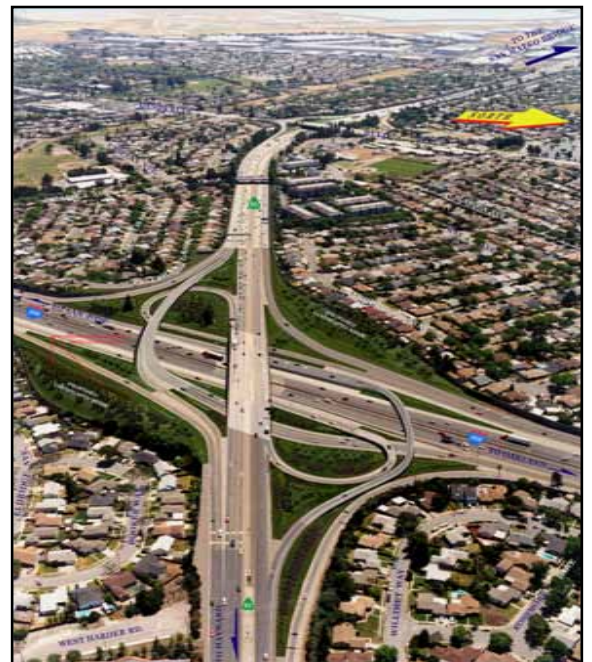
This corridor is consistently one of the Bay Area's most congested during the evening commute. This is due in part to the lane merging and weaving that is required by the existing cloverleaf interchange. The new interchange will feature direct freeway-to-freeway connector ramps that will increase traffic capacity and improve overall safety and traffic operations in the area. With the new direct-connector ramps, drivers coming off the San Mateo-Hayward Bridge can access Interstate 880 without having to compete with traffic headed onto east Route 92 from south Interstate 880 (see progress photos on pages 64 and 65).



Overview of Progress on 92/880



92/880 Retaining Wall D1 & D2 Approach to NWCONN



Future Interstate 880/State Route 92 Interchange (as simulated) Looking West toward San Mateo

## **Stage 1 – Construct East Route 92 to North Interstate 880 Connector**

The new east Route 92 to north Interstate 880 connector (ENCONN) is the most critical fly over structure for relieving congestion in the corridor. The ENCONN will be first used as a detour to allow for future stages of work, while keeping traffic flowing.

**Status:** ENCONN was completed and opened to detour traffic on May 16, 2009.

## **Stage 2 – Replace South Side of Route 92 Separation Structure**

By detouring eastbound Route 92 traffic onto ENCONN, the existing separation structure that carries SR92 over I-880 can be replaced. The existing structure will be cut lengthwise, and then demolished and replaced separately. In this stage, the south side of the structure will be replaced, while west Route 92 and south-Interstate-880-to-east-Route-92 traffic will stay on the remaining structure.

**Status:** Work on the south side of the separation structure is complete.

## **Stage 3 – Replace North Side of Route 92 Separation Structure**

Upon completion of Stage 2, the existing north side of the separation structure will be demolished and replaced. Its traffic will then be shifted onto the newly reconstructed south side.

**Status:** The demolition of the existing westbound separation structure (north side) was completed on May 5, 2010. The north side structure is forecast to be complete in March of 2011.

## **Stage 4 – Final Realignment and Other Work**

In addition to ENCONN and the separation structure, direct north 880 to west 92 connector (NWCONN) and west 92 to south 880 connector (WSCONN) remain to be completed along with a new Eldridge Avenue Pedestrian Overcrossing and new Calaroga Avenue Overcrossing.

**Status:** The NWCONN structure is approximately 50 percent complete while the WSCONN structure is approximately 30 percent complete. The new Eldridge Avenue pedestrian overcrossing will be opened in August 2010 and is currently 85 percent complete. A new pump station for the interchange is also in construction and scheduled to be completed in August 2010. A temporary Calaroga Avenue Bridge widening was completed in January 2010 to allow for stage construction of a new Calaroga Avenue Bridge. The left Calaroga Avenue is approximately 75 percent complete and is forecast to be complete in August 2010. Upon completion of the left bridge the right bridge will be constructed and is forecast to be completed in September 2011.



**Stage 1 - Construct East Route 92 to North Interstate 880 Direct Connector**



**Stage 2 - Demolish and Replace South Side of Route 92 Separation Structure**



**Stage 3 - Demolish and Replace North Side of Route 92 Separation Structure**



**Stage 4 - Final Realignment and Other Work**



## REGIONAL MEASURE 1 PROGRAM

### Other Completed Projects

#### San Mateo-Hayward Bridge-Widening Project

**Project Status: Completed 2003**

This project expanded the low-rise concrete trestle section of the San Mateo-Hayward Bridge to allow for three lanes in each direction to match the existing configuration of the high-rise steel section of the bridge.



Widening of the San Mateo-Hayward Bridge Trestle on Left

#### Richmond-San Rafael Bridge Rehabilitation Projects

**Project Status: Completed 2006**

Two major rehabilitation projects for the Richmond-San Rafael Bridge were funded and completed: (1) replacement of the western concrete approach trestle and ship-collision protection fender system; and (2) rehabilitation of deck joints and resurfacing of the bridge deck.

In 2005, along with the seismic retrofit of the bridge, the trestle and fender replacement work was completed as part of the same project. Under a separate contract in 2006, the bridge was resurfaced with a polyester concrete overlay along with the repair of numerous deck joints.



New Richmond-San Rafael Bridge West Approach Trestle under Construction

#### Richmond Parkway Construction Project

**Project Status: Completed 2001**

The final connections to the Richmond Parkway from Interstate 580 near the Richmond-San Rafael Bridge were completed in May 2001.



## New Alfred Zampa Memorial (Carquinez) Bridge Project

**Project Status: Completed 2003**



New Alfred Zampa Memorial (Carquinez) Bridge Soon after Opening to Traffic, with Crockett Interchange Still under Construction

The new western span of the Carquinez Bridge, which replaced the original 1927 span, is a twin-towered suspension bridge with three mixed-flow lanes, a new carpool lane shoulders and a bicycle and pedestrian pathway.

## Benicia-Martinez Bridge Project

**Project Status: Completed 2009**



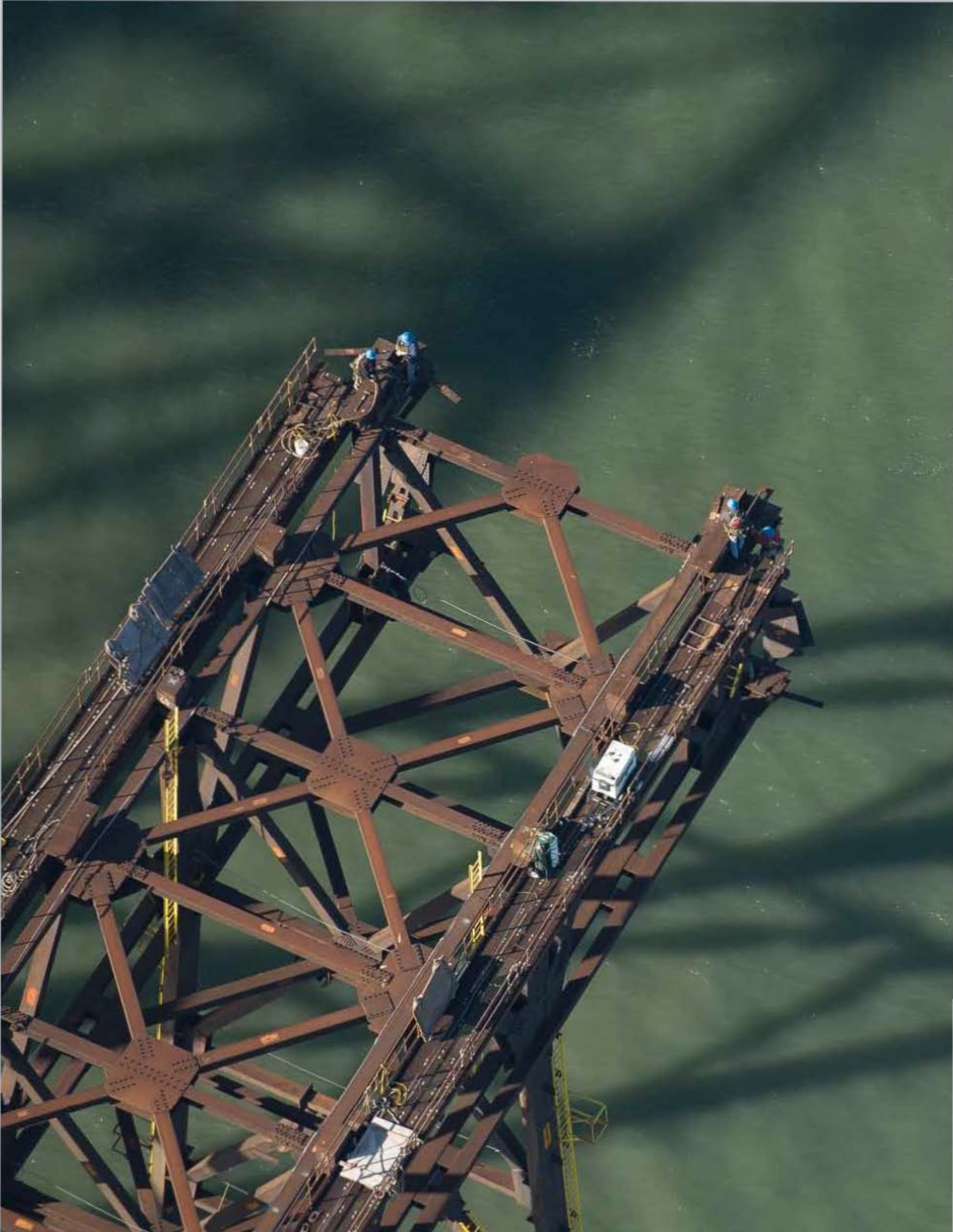
Benicia-Martinez Bridge Pedestrian/Bicycle Pathway Opened to the Public in August 2009

A two-year project to rehabilitate and reconfigure the original Benicia-Martinez Bridge began shortly after the opening of the new Congressman George Miller Bridge. The existing 1.2-mile roadway surface on the steel deck truss bridge was modified to carry four lanes of southbound traffic (one more than before)—with shoulders on both sides—plus a bicycle/pedestrian path on the west side of the span that connects to Park Road in Benicia and to Marina Vista Boulevard in Martinez. Reconstruction of the east side of the bridge and approaches was completed in August 2008, and reconstruction of the west side of the bridge an approaches and construction of the bicycle/pedestrian pathway was completed in August 2009.

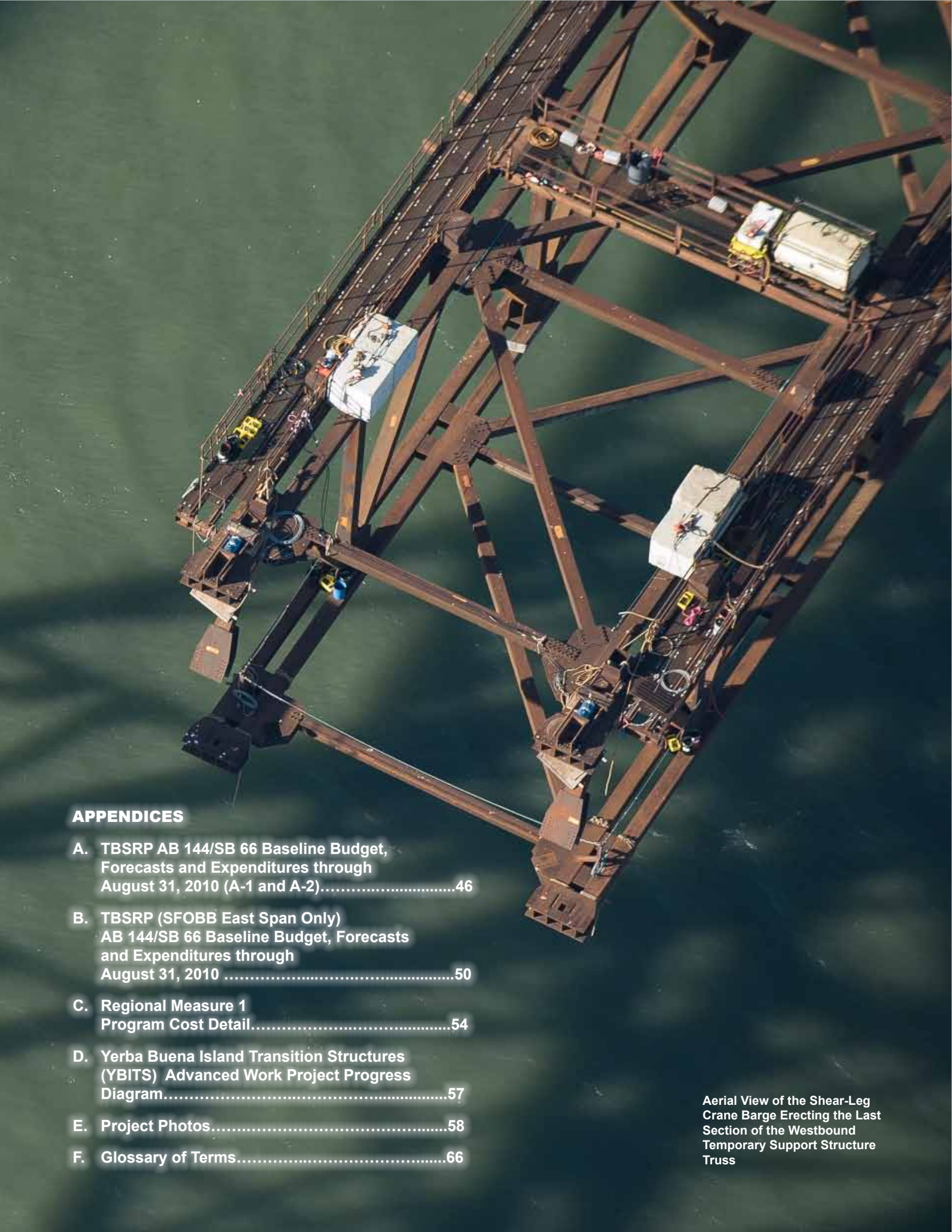
## Bayfront Expressway (State Route 84) Widening Project

**Project Status: Completed 2004**

This project expanded and improved the roadway from the Dumbarton Bridge touchdown to the US 101/Marsh Road interchange by adding additional lanes and turn pockets and improving bicycle and pedestrian access in the area.







**APPENDICES**

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Aerial View of the Shear-Leg Crane Barge Erecting the Last Section of the Westbound Temporary Support Structure Truss



## Appendix A-1: TBSRP AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through August 31, 2010 (\$ Millions)

Contract a	AB 144 / SB 66 Budget (07/2005) c	Approved Changes d	Current Approved Budget (07/2010) e = c + d	Cost to Date (06/2010) f	Cost Forecast (07/2010) g	At- Completion Variance h = g - e
<b>SFOBB East Span Replacement Project</b>						
Capital Outlay Support	959.3	203.0	1,162.3	858.0	1,272.2	109.9
Capital Outlay Construction	4,492.2	203.8	4,696.0	3,397.3	5,005.8	309.8
Other Budgeted Capital	35.1	(3.3)	31.8	0.7	7.7	(24.1)
<b>Total</b>	<b>5,486.6</b>	<b>403.5</b>	<b>5,890.1</b>	<b>4,256.0</b>	<b>6,285.7</b>	<b>395.6</b>
<b>SFOBB West Approach Replacement</b>						
Capital Outlay Support	120.0	(2.0)	118.0	117.5	118.5	0.5
Capital Outlay Construction	309.0	41.7	350.7	328.0	338.1	(12.6)
<b>Total</b>	<b>429.0</b>	<b>39.7</b>	<b>468.7</b>	<b>445.5</b>	<b>456.6</b>	<b>(12.1)</b>
<b>SFOBB West Span Retrofit</b>						
Capital Outlay Support	75.0	(0.2)	74.8	74.9	74.8	-
Capital Outlay Construction	232.9	(5.5)	227.4	227.4	227.4	-
<b>Total</b>	<b>307.9</b>	<b>(5.7)</b>	<b>302.2</b>	<b>302.3</b>	<b>302.2</b>	<b>-</b>
<b>Richmond-San Rafael Bridge Retrofit</b>						
Capital Outlay Support	134.0	(7.0)	127.0	126.8	127.0	-
Capital Outlay Construction	780.0	(90.5)	689.5	667.5	689.5	-
<b>Total</b>	<b>914.0</b>	<b>(97.5)</b>	<b>816.5</b>	<b>794.3</b>	<b>816.5</b>	<b>-</b>
<b>Benicia-Martinez Bridge Retrofit</b>						
Capital Outlay Support	38.1	-	38.1	38.1	38.1	-
Capital Outlay Construction	139.7	-	139.7	139.7	139.7	-
<b>Total</b>	<b>177.8</b>	<b>-</b>	<b>177.8</b>	<b>177.8</b>	<b>177.8</b>	<b>-</b>
<b>Carquinez Bridge Retrofit</b>						
Capital Outlay Support	28.7	0.1	28.8	28.8	28.8	-
Capital Outlay Construction	85.5	(0.1)	85.4	85.4	85.4	-
<b>Total</b>	<b>114.2</b>	<b>-</b>	<b>114.2</b>	<b>114.2</b>	<b>114.2</b>	<b>-</b>
<b>San Mateo-Hayward Retrofit</b>						
Capital Outlay Support	28.1	-	28.1	28.1	28.1	-
Capital Outlay Construction	135.4	(0.1)	135.3	135.3	135.3	-
<b>Total</b>	<b>163.5</b>	<b>(0.1)</b>	<b>163.4</b>	<b>163.4</b>	<b>163.4</b>	<b>-</b>
<b>Vincent Thomas Bridge Retrofit (Los Angeles)</b>						
Capital Outlay Support	16.4	-	16.4	16.4	16.4	-
Capital Outlay Construction	42.1	(0.1)	42.0	42.0	42.0	-
<b>Total</b>	<b>58.5</b>	<b>(0.1)</b>	<b>58.4</b>	<b>58.4</b>	<b>58.4</b>	<b>-</b>
<b>San Diego-Coronado Bridge Retrofit</b>						
Capital Outlay Support	33.5	(0.3)	33.2	33.2	33.2	-
Capital Outlay Construction	70.0	(0.6)	69.4	69.4	69.4	-
<b>Total</b>	<b>103.5</b>	<b>(0.9)</b>	<b>102.6</b>	<b>102.6</b>	<b>102.6</b>	<b>-</b>

\* Budget for Richmond-San Rafael Bridge includes \$16.9 million of deck joint rehabilitation work that considered to be eligible for seismic retrofit program funding.

Note: Details may not sum to totals due to rounding effects.

## Appendix A-1: TBSRP AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through August 31, 2010 (\$ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (07/2010)	Cost to Date (06/2010***)	Cost Forecast (07/2010)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
<b>Antioch Bridge</b>						
Capital Outlay Support	-	31.0	31.0	9.6	35.5	4.5
Capital Outlay Support by BATA				6.2		
Capital Outlay Construction	-	70.0	70.0	-	62.5	(7.5)
<b>Total</b>	<b>-</b>	<b>101.0</b>	<b>101.0</b>	<b>15.8</b>	<b>98.0</b>	<b>(3.0)</b>
<b>Dumbarton Bridge</b>						
Capital Outlay Support	-	95.0	95.0	15.9	56.0	(39.0)
Capital Outlay Support by BATA				6.0		
Capital Outlay Construction	-	270.0	270.0	0.3	92.7	(177.3)
<b>Total</b>	<b>-</b>	<b>365.0</b>	<b>365.0</b>	<b>22.2</b>	<b>148.7</b>	<b>(216.3)</b>
<b>Subtotal Capital Outlay Support</b>	<b>1,433.1</b>	<b>319.6</b>	<b>1,752.7</b>	<b>1,359.5</b>	<b>1,828.6</b>	<b>75.9</b>
<b>Subtotal Capital Outlay</b>	<b>6,286.8</b>	<b>488.6</b>	<b>6,775.4</b>	<b>5,092.3</b>	<b>6,887.8</b>	<b>112.4</b>
<b>Subtotal Other Budgeted Capital</b>	<b>35.1</b>	<b>(3.3)</b>	<b>31.8</b>	<b>0.7</b>	<b>7.7</b>	<b>(24.1)</b>
<b>Miscellaneous Program Costs</b>	<b>30.0</b>	<b>-</b>	<b>30.0</b>	<b>25.5</b>	<b>30.0</b>	<b>-</b>
<b>Subtotal Toll Bridge Seismic Retrofit Program</b>	<b>7,785.0</b>	<b>804.9</b>	<b>8,589.9</b>	<b>6,478.0</b>	<b>8,754.1</b>	<b>164.2</b>
<b>Net Programmatic Risks*</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>202.8</b>	<b>202.8</b>
<b>Program Contingency</b>	<b>900.0</b>	<b>(191.9)</b>	<b>708.1</b>	<b>-</b>	<b>341.1</b>	<b>(367.0)</b>
<b>Total Toll Bridge Seismic Retrofit Program</b>	<b>8,685.0</b>	<b>613.0</b>	<b>9,298.0</b>	<b>6,478.0</b>	<b>9,298.0</b>	<b>-</b>

### Notes:

\* The Net Programmatic Risks of \$202.8 million is comprised of \$195.8 million program level risks and \$7 million risk reconciliation.

## Appendix A-2: TBSRP AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through August 31, 2010 (\$ Millions)

Bridge	AB 144 Baseline Budget	TBPOC Current Approved Budget	Expenditures to date and Encumbrances as of June 2010 See Note (1)	Estimated Costs not yet spent or Encumbered as of June 2010	Total Forecast as of August 2010
a	b	c	d	e	f = d + e
<b>Other Completed Projects</b>					
Capital Outlay Support	144.9	144.6	144.6	-	144.6
Capital Outlay	472.6	471.9	472.6	(0.8)	471.8
<b>Total</b>	<b>617.5</b>	<b>616.5</b>	<b>617.2</b>	<b>(0.8)</b>	<b>616.4</b>
<b>Richmond-San Rafael</b>					
Capital Outlay Support	134.0	127.0	126.8	0.2	127.0
Capital Outlay	698.0	689.5	674.1	15.4	689.5
Project Reserves	82.0	-	-	-	-
<b>Total</b>	<b>914.0</b>	<b>816.5</b>	<b>800.9</b>	<b>15.6</b>	<b>816.5</b>
<b>West Span Retrofit</b>					
Capital Outlay Support	75.0	74.8	74.8	-	74.8
Capital Outlay	232.9	227.4	232.9	(5.5)	227.4
<b>Total</b>	<b>307.9</b>	<b>302.2</b>	<b>307.7</b>	<b>(5.5)</b>	<b>302.2</b>
<b>West Approach</b>					
Capital Outlay Support	120.0	118.0	117.6	0.9	118.5
Capital Outlay	309.0	350.7	342.5	(4.4)	338.1
<b>Total</b>	<b>429.0</b>	<b>468.7</b>	<b>460.1</b>	<b>(3.5)</b>	<b>456.6</b>
<b>SFOBB East Span - Skyway</b>					
Capital Outlay Support	197.0	181.2	181.1	0.1	181.2
Capital Outlay	1,293.0	1,254.1	1,368.3	(114.2)	1,254.1
<b>Total</b>	<b>1,490.0</b>	<b>1,435.3</b>	<b>1,549.4</b>	<b>(114.1)</b>	<b>1,435.3</b>
<b>SFOBB East Span - SAS - Superstructure</b>					
Capital Outlay Support	214.6	375.5	244.3	228.0	472.3
Capital Outlay	1,753.7	1,753.7	1,753.7	293.1	2,046.8
<b>Total</b>	<b>1,968.3</b>	<b>2,129.2</b>	<b>1,998.0</b>	<b>521.1</b>	<b>2,519.1</b>
<b>SFOBB East Span - SAS - Foundations</b>					
Capital Outlay Support	62.5	37.6	37.6	-	37.6
Capital Outlay	339.9	307.3	308.7	(1.4)	307.3
<b>Total</b>	<b>402.4</b>	<b>344.9</b>	<b>346.3</b>	<b>(1.4)</b>	<b>344.9</b>
<b>Small YBI Projects</b>					
Capital Outlay Support	10.6	10.6	10.2	0.4	10.6
Capital Outlay	15.6	15.6	16.6	(0.9)	15.7
<b>Total</b>	<b>26.2</b>	<b>26.2</b>	<b>26.8</b>	<b>(0.5)</b>	<b>26.3</b>
<b>YBI Detour</b>					
Capital Outlay Support	29.5	90.7	83.8	6.3	90.1
Capital Outlay	131.9	492.8	493.1	(3.7)	489.4
<b>Total</b>	<b>161.4</b>	<b>583.5</b>	<b>576.9</b>	<b>2.6</b>	<b>579.5</b>
<b>YBI- Transition Structures</b>					
Capital Outlay Support	78.7	106.4	16.4	99.8	116.2
Capital Outlay	299.4	206.3	125.9	112.5	238.4
<b>Total</b>	<b>378.1</b>	<b>312.7</b>	<b>142.3</b>	<b>212.3</b>	<b>354.6</b>

Note: Details may not sum to totals due to rounding effects.



## Appendix A-2: TBSRP AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through August 31, 2010 (\$ Millions) Cont.

Contract	AB 144 Baseline Budget	TBPOC Current Approved Budget	Expenditures to date and Encumbrances as of June 2010 see Note (1)	Estimated Costs not yet spent or Encumbered as of June 2010	Total Forecast as of August 2010
a	b	c	d	e	f = d + e
<b>Oakland Touchdown</b>					
Capital Outlay Support	74.4	93.9	77.2	18.0	95.2
Capital Outlay	283.8	288.0	218.0	64.1	282.1
<b>Total</b>	<b>358.2</b>	<b>381.9</b>	<b>295.2</b>	<b>82.1</b>	<b>377.3</b>
<b>East Span Other Small Projects</b>					
Capital Outlay Support	212.3	206.5	214.2	(7.6)	206.6
Capital Outlay	170.8	170.8	94.0	52.6	146.6
<b>Total</b>	<b>383.1</b>	<b>377.3</b>	<b>308.2</b>	<b>45.0</b>	<b>353.2</b>
<b>Existing Bridge Demolition</b>					
Capital Outlay Support	79.7	59.9	0.4	62.0	62.4
Capital Outlay	239.2	239.1	-	233.0	233.0
<b>Total</b>	<b>318.9</b>	<b>299.0</b>	<b>0.4</b>	<b>295.0</b>	<b>295.4</b>
<b>Antioch Bridge</b>					
Capital Outlay Support	-	31.0	9.8	19.5	29.3
Capital Outlay Support by BATA			<b>6.2</b>	-	<b>6.2</b>
Capital Outlay	-	70.0	47.0	15.5	62.5
<b>Total</b>	<b>-</b>	<b>101.0</b>	<b>63.0</b>	<b>35.0</b>	<b>98.0</b>
<b>Dumbarton Bridge</b>					
Capital Outlay Support	-	95.0	15.9	34.1	50.0
Capital Outlay Support by BATA			<b>6.0</b>	-	<b>6.0</b>
Capital Outlay	-	270.0	0.3	92.4	92.7
<b>Total</b>	<b>-</b>	<b>365.0</b>	<b>22.2</b>	<b>126.5</b>	<b>148.7</b>
<b>Miscellaneous Program Costs</b>	<b>30.0</b>	<b>30.0</b>	<b>25.5</b>	<b>4.5</b>	<b>30.0</b>
<b>Total Capital Outlay Support</b>	<b>1,463.2</b>	<b>1,782.7</b>	<b>1,392.4</b>	<b>466.2</b>	<b>1,858.6</b>
<b>Total Capital Outlay</b>	<b>6,321.8</b>	<b>6,807.2</b>	<b>6,147.7</b>	<b>747.8</b>	<b>6,895.5</b>
<b>Program Total</b>	<b>7,785.0</b>	<b>8,589.9</b>	<b>7,540.1</b>	<b>1,214.0</b>	<b>8,754.1</b>

(1). Funds allocated to project or contract for Capital Outlay and Support needs includes Capital Outlay Support total allocation for FY 06/07.

(2). BSA provided a distribution of program contingency in December 2004 based in Bechtel Infrastructure Corporation input.  
This Column is subject to revision upon completion of Department's risk assessment update.

(3) Total Capital Outlay Support includes program indirect costs.

Note: Details may not sum to totals due to rounding effects.

## Appendix B: TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through August 31, 2010 (\$ Millions)

Contract a	AB 144 / SB 66 Budget (07/2005) c	Approved Changes d	Current Approved Budget (07/2010) e = c + d	Cost to Date (06/2010) f	Cost Forecast (07/2010) g	At- Completion Variance h = g - e
<b>San Francisco-Oakland Bay Bridge East Span Replacement Project</b>						
<b>East Span - SAS Superstructure</b>						
Capital Outlay Support	214.6	160.9	375.5	238.4	472.3	96.8
Capital Outlay Construction	1,753.7	-	1,753.7	1,054.0	2,046.8	293.1
<b>Total</b>	<b>1,968.3</b>	<b>160.9</b>	<b>2,129.2</b>	<b>1,292.4</b>	<b>2,519.1</b>	<b>389.9</b>
<b>SAS W2 Foundations</b>						
Capital Outlay Support	10.0	(0.8)	9.2	9.2	9.2	-
Capital Outlay Construction	26.4	-	26.4	26.4	26.4	-
<b>Total</b>	<b>36.4</b>	<b>(0.8)</b>	<b>35.6</b>	<b>35.6</b>	<b>35.6</b>	<b>-</b>
<b>YBI South/South Detour</b>						
Capital Outlay Support	29.4	61.3	90.7	83.3	90.1	(0.6)
Capital Outlay Construction	131.9	360.9	492.8	452.8	489.4	(3.4)
<b>Total</b>	<b>161.3</b>	<b>422.2</b>	<b>583.5</b>	<b>536.1</b>	<b>579.5</b>	<b>(4.0)</b>
<b>East Span - Skyway</b>						
Capital Outlay Support	197.0	(15.8)	181.2	181.2	181.2	-
Capital Outlay Construction	1,293.0	(38.9)	1,254.1	1,236.9	1,254.1	-
<b>Total</b>	<b>1,490.0</b>	<b>(54.7)</b>	<b>1,435.3</b>	<b>1,418.1</b>	<b>1,435.3</b>	<b>-</b>
<b>East Span - SAS E2/T1 Foundations</b>						
Capital Outlay Support	52.5	(24.1)	28.4	28.4	28.4	-
Capital Outlay Construction	313.5	(32.6)	280.9	274.8	280.9	-
<b>Total</b>	<b>366.0</b>	<b>(56.7)</b>	<b>309.3</b>	<b>303.2</b>	<b>309.3</b>	<b>-</b>
<b>YBI Transition Structures (see notes below)</b>						
Capital Outlay Support	78.7	27.7	106.4	32.5	116.2	9.8
Capital Outlay Construction	299.3	(93.0)	206.3	12.3	238.4	32.1
<b>Total</b>	<b>378.0</b>	<b>(65.3)</b>	<b>312.7</b>	<b>44.8</b>	<b>354.6</b>	<b>41.9</b>
<b>* YBI- Transition Structures</b>						
Capital Outlay Support			16.4	16.4	16.5	0.1
Capital Outlay Construction			-	-	-	-
<b>Total</b>			<b>16.4</b>	<b>16.4</b>	<b>16.5</b>	<b>0.1</b>
<b>* YBI- Transition Structures Contract No. 1</b>						
Capital Outlay Support			57.0	11.2	65.7	8.7
Capital Outlay Construction			144.0	12.3	164.3	20.3
<b>Total</b>			<b>201.0</b>	<b>23.5</b>	<b>230.0</b>	<b>29.0</b>
<b>* YBI- Transition Structures Contract No. 2</b>						
Capital Outlay Support			32.0	4.8	33.0	1.0
Capital Outlay Construction			59.0	-	70.8	11.8
<b>Total</b>			<b>91.0</b>	<b>4.8</b>	<b>103.8</b>	<b>12.8</b>
<b>* YBI- Transition Structures Contract No. 3 Landscape</b>						
Capital Outlay Support			1.0	-	1.0	-
Capital Outlay Construction			3.3	-	3.3	-
<b>Total</b>			<b>4.3</b>	<b>-</b>	<b>4.3</b>	<b>-</b>

Note: Details may not sum to totals due to rounding effects.

## Appendix B: TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through August 31, 2010 (\$ Millions) Cont.

Contract a	AB 144 / SB 66 Budget (07/2005) c	Approved Changes d	Current Approved Budget (07/2010) e = c + d	Cost to Date (06/2010) f	Cost Forecast (07/2010) g	At- Completion Variance h = g - e
<b>Oakland Touchdown (see notes below)</b>						
Capital Outlay Support	74.4	19.5	93.9	76.6	95.2	1.3
Capital Outlay Construction	283.8	4.2	288.0	208.7	282.1	(5.9)
<b>Total</b>	<b>358.2</b>	<b>23.7</b>	<b>381.9</b>	<b>285.3</b>	<b>377.3</b>	<b>(4.6)</b>
<b>*OTD Prior-to-Split Costs</b>						
Capital Outlay Support			21.7	20.1	21.7	-
Capital Outlay Construction			-	-	-	-
<b>Total</b>			<b>21.7</b>	<b>20.1</b>	<b>21.7</b>	<b>-</b>
<b>*OTD Submarine Cable</b>						
Capital Outlay Support			0.9	0.9	0.9	-
Capital Outlay Construction			9.6	7.9	9.6	-
<b>Total</b>			<b>10.5</b>	<b>8.8</b>	<b>10.5</b>	<b>-</b>
<b>*OTD No.1 (Westbound)</b>						
Capital Outlay Support			47.3	47.7	47.6	0.3
Capital Outlay Construction			212.0	200.8	208.9	(3.1)
<b>Total</b>			<b>259.3</b>	<b>248.5</b>	<b>256.5</b>	<b>(2.8)</b>
<b>*OTD No.2 (Eastbound)</b>						
Capital Outlay Support			22.5	7.2	23.5	1.0
Capital Outlay Construction			62.0	-	59.2	(2.8)
<b>Total</b>			<b>84.5</b>	<b>7.2</b>	<b>82.7</b>	<b>(1.8)</b>
<b>*OTD Electrical Systems</b>						
Capital Outlay Support			1.5	0.8	1.5	-
Capital Outlay Construction			4.4	-	4.4	-
<b>Total</b>			<b>5.9</b>	<b>0.8</b>	<b>5.9</b>	<b>-</b>
<b>Existing Bridge Demolition</b>						
Capital Outlay Support	79.7	(19.8)	59.9	0.4	62.4	2.5
Capital Outlay Construction	239.2	(0.1)	239.1	-	233.0	(6.1)
<b>Total</b>	<b>318.9</b>	<b>(19.9)</b>	<b>299.0</b>	<b>0.4</b>	<b>295.4</b>	<b>(3.6)</b>
<b>YBI/SAS Archeology</b>						
Capital Outlay Support	1.1	-	1.1	1.1	1.1	-
Capital Outlay Construction	1.1	-	1.1	1.1	1.1	-
<b>Total</b>	<b>2.2</b>	<b>-</b>	<b>2.2</b>	<b>2.2</b>	<b>2.2</b>	<b>-</b>
<b>YBI - USCG Road Relations</b>						
Capital Outlay Support	3.0	-	3.0	2.7	3.0	-
Capital Outlay Construction	3.0	-	3.0	2.8	3.0	-
<b>Total</b>	<b>6.0</b>	<b>-</b>	<b>6.0</b>	<b>5.5</b>	<b>6.0</b>	<b>-</b>
<b>YBI - Substation and Viaduct</b>						
Capital Outlay Support	6.5	-	6.5	6.4	6.5	-
Capital Outlay Construction	11.6	-	11.6	11.3	11.6	-
<b>Total</b>	<b>18.1</b>	<b>-</b>	<b>18.1</b>	<b>17.7</b>	<b>18.1</b>	<b>-</b>
<b>Oakland Geofill</b>						
Capital Outlay Support	2.5	-	2.5	2.5	2.5	-
Capital Outlay Construction	8.2	-	8.2	8.2	8.2	-
<b>Total</b>	<b>10.7</b>	<b>-</b>	<b>10.7</b>	<b>10.7</b>	<b>10.7</b>	<b>-</b>

Note: Details may not sum to totals due to rounding effects.



## Appendix B: TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through August 31, 2010 (\$ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (07/2010)	Cost to Date (06/2010)	Cost Forecast (07/2010)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
<b>Pile Installation Demonstration Project</b>						
Capital Outlay Support	1.8	-	1.8	1.8	1.8	-
Capital Outlay Construction	9.3	-	9.3	9.2	9.3	-
<b>Total</b>	<b>11.1</b>	<b>-</b>	<b>11.1</b>	<b>11.0</b>	<b>11.1</b>	<b>-</b>
<b>Stormwater Treatment Measures</b>						
Capital Outlay Support	6.0	2.2	8.2	8.1	8.2	-
Capital Outlay Construction	15.0	3.3	18.3	16.7	18.3	-
<b>Total</b>	<b>21.0</b>	<b>5.5</b>	<b>26.5</b>	<b>24.8</b>	<b>26.5</b>	<b>-</b>
<b>Right-of-Way and Environmental Mitigation</b>						
Capital Outlay Support	-	-	-	-	-	-
Capital Outlay & Right-of-Way	72.4	-	72.4	51.3	72.4	-
<b>Total</b>	<b>72.4</b>	<b>-</b>	<b>72.4</b>	<b>51.3</b>	<b>72.4</b>	<b>-</b>
<b>Sunk Cost - Existing East Span Retrofit</b>						
Capital Outlay Support	39.5	-	39.5	39.5	39.5	-
Capital Outlay Construction	30.8	-	30.8	30.8	30.8	-
<b>Total</b>	<b>70.3</b>	<b>-</b>	<b>70.3</b>	<b>70.3</b>	<b>70.3</b>	<b>-</b>
<b>Other Capital Outlay Support</b>						
Environmental Phase	97.7	-	97.7	97.8	97.7	-
Pre-Split Project Expenditures	44.9	-	44.9	44.9	44.9	-
Non-project Specific Costs	20.0	(8.0)	12.0	3.2	12.0	-
<b>Total</b>	<b>162.6</b>	<b>(8.0)</b>	<b>154.6</b>	<b>145.9</b>	<b>154.6</b>	<b>-</b>
<b>Subtotal Capital Outlay Support</b>	<b>959.3</b>	<b>203.0</b>	<b>1,162.3</b>	<b>858.0</b>	<b>1,272.2</b>	<b>109.9</b>
<b>Subtotal Capital Outlay Construction</b>	<b>4,492.2</b>	<b>203.8</b>	<b>4,696.0</b>	<b>3,397.3</b>	<b>5,005.8</b>	<b>309.8</b>
<b>Other Budgeted Capital</b>	<b>35.1</b>	<b>(3.3)</b>	<b>31.8</b>	<b>0.7</b>	<b>7.7</b>	<b>(24.1)</b>
						<b>-</b>
<b>Total SFOBB East Span Replacement Project</b>	<b>5,486.6</b>	<b>403.5</b>	<b>5,890.1</b>	<b>4,256.0</b>	<b>6,285.7</b>	<b>395.6</b>

Note: Details may not sum to totals due to rounding effects.

## Appendix C: Regional Measure 1 Program Cost Detail (\$ Millions)

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (07/2010)	Cost to Date (06/2010)	Cost Forecast (07/2010)	At- Completion Variance
a	c	d	e = c + d	f	g	h = g - e
<b>New Benicia-Martinez Bridge Project</b>						
<b>New Bridge</b>						
Capital Outlay Support						
BATA Funding	84.9	6.9	91.8	91.9	91.9	0.1
Non-Bata Funding	-	0.1	0.1	0.1	0.1	-
Subtotal	84.9	7.0	91.9	92.0	92.0	0.1
Capital Outlay Construction			-			-
BATA Funding	661.9	94.6	756.5	753.8	756.5	-
Non-Bata Funding	10.1	-	10.1	10.1	10.1	-
Subtotal	672.0	94.6	766.6	763.9	766.6	-
<b>Total</b>	<b>756.9</b>	<b>101.6</b>	<b>858.5</b>	<b>855.9</b>	<b>858.6</b>	<b>0.1</b>
<b>I-680/I-780 Interchange Reconstruction</b>						
Capital Outlay Support						
BATA Funding	24.9	5.2	30.1	30.1	30.1	-
Non-Bata Funding	1.4	5.2	6.6	6.3	6.6	-
Subtotal	26.3	10.4	36.7	36.4	36.7	-
Capital Outlay Construction						
BATA Funding	54.7	26.9	81.6	77.1	81.6	-
Non-Bata Funding	21.6	-	21.6	21.7	21.7	0.1
Subtotal	76.3	26.9	103.2	98.8	103.3	0.1
<b>Total</b>	<b>102.6</b>	<b>37.3</b>	<b>139.9</b>	<b>135.2</b>	<b>140.0</b>	<b>0.1</b>
<b>I-680/Marina Vista Interchange Reconstruction</b>						
Capital Outlay Support	18.3	1.8	20.1	20.2	20.2	0.1
Capital Outlay Construction	51.5	4.9	56.4	56.1	56.4	-
<b>Total</b>	<b>69.8</b>	<b>6.7</b>	<b>76.5</b>	<b>76.3</b>	<b>76.6</b>	<b>0.1</b>
<b>New Toll Plaza and Administration Building</b>						
Capital Outlay Support	11.9	3.8	15.7	15.7	15.7	-
Capital Outlay Construction	24.3	2.0	26.3	25.1	26.3	-
<b>Total</b>	<b>36.2</b>	<b>5.8</b>	<b>42.0</b>	<b>40.8</b>	<b>42.0</b>	<b>-</b>
<b>Existing Bridge &amp; Interchange Modifications</b>						
Capital Outlay Support						
BATA Funding	4.3	13.5	17.8	17.8	17.8	-
Non-Bata Funding	-	0.9	0.9	0.8	0.9	-
Subtotal	4.3	14.4	18.7	18.6	18.7	-
Capital Outlay Construction						
BATA Funding	17.2	32.8	50.0	37.2	50.0	-
Non-Bata Funding	-	9.5	9.5	9.5	9.5	-
Subtotal	17.2	42.3	59.5	37.2	59.5	-
<b>Total</b>	<b>21.5</b>	<b>56.7</b>	<b>78.2</b>	<b>55.8</b>	<b>78.2</b>	<b>-</b>
<b>Other Contracts</b>						
Capital Outlay Support	11.4	(2.3)	9.1	9.1	9.1	-
Capital Outlay Construction	20.3	3.3	23.6	17.8	23.6	-
Capital Outlay Right-of-Way	20.4	(0.1)	20.3	17.0	20.3	-
<b>Total</b>	<b>52.1</b>	<b>0.9</b>	<b>53.0</b>	<b>43.9</b>	<b>53.0</b>	<b>-</b>

Note: Details may not sum to totals due to rounding effects.

## Appendix C: Regional Measure 1 Program Cost Detail (\$ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (07/2010)	Cost to Date (06/2010)	Cost Forecast (07/2010)	At- Completion Variance
a	c	d	e = c + d	f	g	h = g - e
New Benicia-Martinez Bridge Project continued...						
Subtotal BATA Capital Outlay Support	155.7	28.9	184.6	184.8	184.8	0.2
Subtotal BATA Capital Outlay Construction	829.9	164.5	994.4	967.1	994.4	-
Subtotal Capital Outlay Right-of-Way	20.4	(0.1)	20.3	17.0	20.3	-
Subtotal Non-BATA Capital Outlay Support	1.4	6.2	7.6	7.2	7.6	-
Subtotal Non-BATA Capital Outlay Construction	31.7	9.5	41.2	31.8	41.3	0.1
Project Reserves	20.8	3.6	24.4	-	24.1	(0.3)
Total New Benicia-Martinez Bridge Project						
	1,059.9	212.6	1,272.5	1,207.9	1,272.5	-
Notes:	Includes EA's 00601_,00603_,00605_,00606_,00608_,00609_,0060A_,0060C_,0060E_,0060F_,0060G_,0060H_, and all Project Right-of-Way					
Carquinez Bridge Replacement Project						
New Bridge						
Capital Outlay Support	60.5	(0.3)	60.2	60.2	60.2	-
Capital Outlay Construction	253.3	2.7	256.0	255.9	256.0	-
Total	313.8	2.4	316.2	316.1	316.2	-
Crockett Interchange Reconstruction						
Capital Outlay Support	32.0	(0.1)	31.9	31.9	31.9	-
Capital Outlay Construction	73.9	(1.9)	72.0	71.9	72.0	-
Total	105.9	(2.0)	103.9	103.8	103.9	-
Existing 1927 Bridge Demolition						
Capital Outlay Support	16.1	(0.5)	15.6	15.7	15.7	0.1
Capital Outlay Construction	35.2	-	35.2	34.8	35.2	-
Total	51.3	(0.5)	50.8	50.5	50.9	0.1
Other Contracts						
Capital Outlay Support	15.8	1.2	17.0	16.4	17.0	-
Capital Outlay Construction	18.8	(1.2)	17.6	16.3	17.6	-
Capital Outlay Right-of-Way	10.5	(0.1)	10.4	9.9	10.4	-
Total	45.1	(0.1)	45.0	42.6	45.0	-
Subtotal BATA Capital Outlay Support						
	124.4	0.3	124.7	124.2	124.8	0.1
Subtotal BATA Capital Outlay Construction						
	381.2	(0.4)	380.8	378.9	380.8	-
Subtotal Capital Outlay Right-of-Way						
	10.5	(0.1)	10.4	9.9	10.4	-
Project Reserves						
	12.1	(9.8)	2.3	-	2.2	(0.1)
Total Carquinez Bridge Replacement Project						
	528.2	(10.0)	518.2	513.0	518.2	-
Notes						
Other Contracts include EA's 01301_,01302_,01303_,01304_,01305_,01306_,01307_,01308_,01309_,0130A_,0130C_,0130D_,0130F_,0130G_,0130H_,0130J_,00453_,00493_,04700_,00607_,2A270_,and 29920_ and all Project Right-of-Way						

Note: Details may not sum to totals due to rounding effects.



## Appendix C: Regional Measure 1 Program Cost Detail (\$ Millions) Cont.

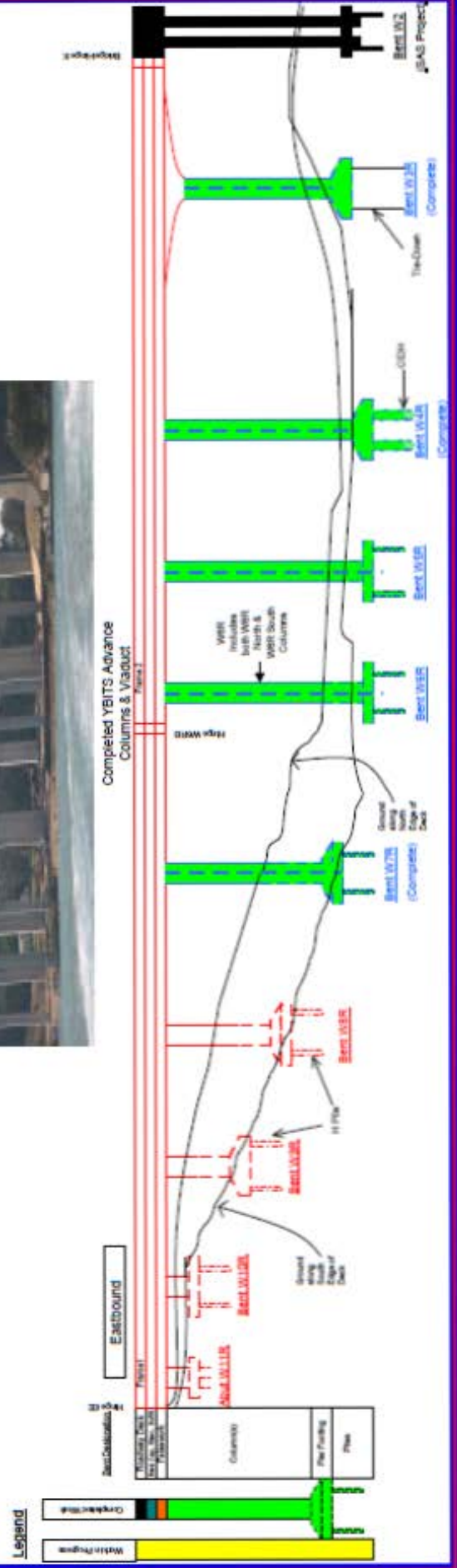
Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (07/2010)	Cost to Date (06/2010)	Cost Forecast (07/2010)	At- Completion Variance
a	c	d	e = c + d	f	g	h = g - e
<b>Richmond-San Rafael Bridge Trestle. Fender, and Deck Joint Rehabilitation</b>			See note on following page			
Capital Outlay Support						
BATA Funding	2.2	(0.8)	1.4	1.4	1.4	-
Non-BATA Funding	8.6	1.8	10.4	10.4	10.4	-
Subtotal	10.8	1.0	11.8	11.8	11.8	-
Capital Outlay Construction						
BATA Funding	40.2	(6.8)	33.4	33.3	33.4	-
Non-BATA Funding	51.1	-	51.1	51.1	51.1	-
Subtotal	91.3	(6.8)	84.5	84.4	84.5	-
Project Reserves	-	0.8	0.8	-	0.8	-
<b>Total</b>	<b>102.1</b>	<b>(5.0)</b>	<b>97.1</b>	<b>96.2</b>	<b>97.1</b>	<b>-</b>
<b>Richmond-San Rafael Bridge Deck Overlay Rehabilitation</b>						
Capital Outlay Support						
BATA Funding	4.0	(0.7)	3.3	3.3	3.3	-
Non-BATA Funding	4.0	(4.0)	-	-	-	-
Subtotal	8.0	(4.7)	3.3	3.3	3.3	-
Capital Outlay Construction	16.9	(0.6)	16.3	16.3	16.3	-
Project Reserves	0.1	0.3	0.4	-	0.4	-
<b>Total</b>	<b>25.0</b>	<b>(5.0)</b>	<b>20.0</b>	<b>19.6</b>	<b>20.0</b>	<b>-</b>
<b>Richmond Parkway Project (RM 1 Share Only)</b>						
Capital Outlay Support	-	-	-	-	-	-
Capital Outlay Construction	5.9	-	5.9	4.3	5.9	-
<b>Total</b>	<b>5.9</b>	<b>-</b>	<b>5.9</b>	<b>4.3</b>	<b>5.9</b>	<b>-</b>
<b>San Mateo-Hayward Bridge Widening</b>						
Capital Outlay Support	34.6	(0.5)	34.1	34.1	34.1	-
Capital Outlay Construction	180.2	(6.1)	174.1	174.1	174.1	-
Capital Outlay Right-of-Way	1.5	(0.9)	0.6	0.5	0.6	-
Project Reserves	1.5	(0.5)	1.0	-	1.0	-
<b>Total</b>	<b>217.8</b>	<b>(8.0)</b>	<b>209.8</b>	<b>208.7</b>	<b>209.8</b>	<b>-</b>
<b>I-880/SR-92 Interchange Reconstruction</b>						
Capital Outlay Support	28.8	34.6	63.4	54.1	63.4	-
Capital Outlay Construction						
BATA Funding	85.2	66.2	151.4	100.3	151.4	-
Non-BATA Funding	9.6	-	9.6	9.6	9.6	-
Subtotal	94.8	66.2	161.0	100.3	161.0	-
Capital Outlay Right-of-Way	9.9	7.0	16.9	12.3	16.9	-
Project Reserves	0.3	3.4	3.7	-	3.7	-
<b>Total</b>	<b>133.8</b>	<b>111.2</b>	<b>245.0</b>	<b>166.7</b>	<b>245.0</b>	<b>-</b>
<b>Bayfront Expressway Widening</b>						
Capital Outlay Support	8.6	(0.2)	8.4	8.3	8.4	-
Capital Outlay Construction	26.5	(1.5)	25.0	24.9	25.0	-
Capital Outlay Right-of-Way	0.2	-	0.2	0.2	0.2	-
Project Reserves	0.8	(0.3)	0.5	-	0.5	-
<b>Total</b>	<b>36.1</b>	<b>(2.0)</b>	<b>34.1</b>	<b>33.4</b>	<b>34.1</b>	<b>-</b>

Note: Details may not sum to totals due to rounding effects.

## Appendix C: Regional Measure 1 Program Cost Detail (\$ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (07/2010)	Cost to Date (06/2010)	Cost Forecast (07/2010)	At- Completion Variance
a	c	d	e = c + d	f	g	h = g - e
<b>US 101/University Avenue Interchange Modification</b>						
Capital Outlay Support	-	-	-	-	-	-
Capital Outlay Construction	3.8	-	3.8	3.7	3.8	-
<b>Total</b>	<b>3.8</b>	<b>-</b>	<b>3.8</b>	<b>3.7</b>	<b>3.8</b>	<b>-</b>
Subtotal BATA Capital Outlay Support	358.3	61.6	419.9	410.2	420.2	0.3
Subtotal BATA Capital Outlay Construction	1,569.8	215.3	1,785.1	1,702.9	1,785.1	-
Subtotal Capital Outlay Right-of-Way	42.5	5.9	48.4	39.9	48.4	-
Subtotal Non-BATA Capital Outlay Support	14.0	4.0	18.0	17.6	18.0	-
Subtotal Non-BATA Capital Outlay Construction	92.4	9.5	101.9	82.9	102.0	0.1
Project Reserves	35.6	(2.5)	33.1	-	32.7	(0.4)
<b>Total RM1 Program</b>	<b>2,112.6</b>	<b>293.8</b>	<b>2,406.4</b>	<b>2,253.5</b>	<b>2,406.4</b>	<b>-</b>
<b>Notes:</b>						
1 Richmond-San Rafael Bridge Trestle, Fender, and Deck Joint Rehabilitation Includes Non-TBSRA Expenses for EA 0438U_ and 04157_						
2 San Mateo-Hayward Bridge Widening includes EA's 00305_,04501_,04503_,04504_, ,04504_,04505_,04506_,04507_,04508_,04509_,27740_,27790_,04860_						

Note: Details may not sum to totals due to rounding effects.





## Appendix E: Project Progress Photographs

### Self-Anchored Suspension Bridge Fabrication



SAS Light Pole Bracket Fabrication



SAS Roadway Box 13 Construction Model



SAS Roadway Box 9 Being Loaded for Shipping at ZPMC



SAS Tower Lift 2 - All Shafts Being Loaded for Shipping at ZPMC









Aerial View of the Viaduct and YBITS Advanced Columns



## Appendix E: Project Progress Photographs

### Self-Anchored Suspension Bridge Field Work

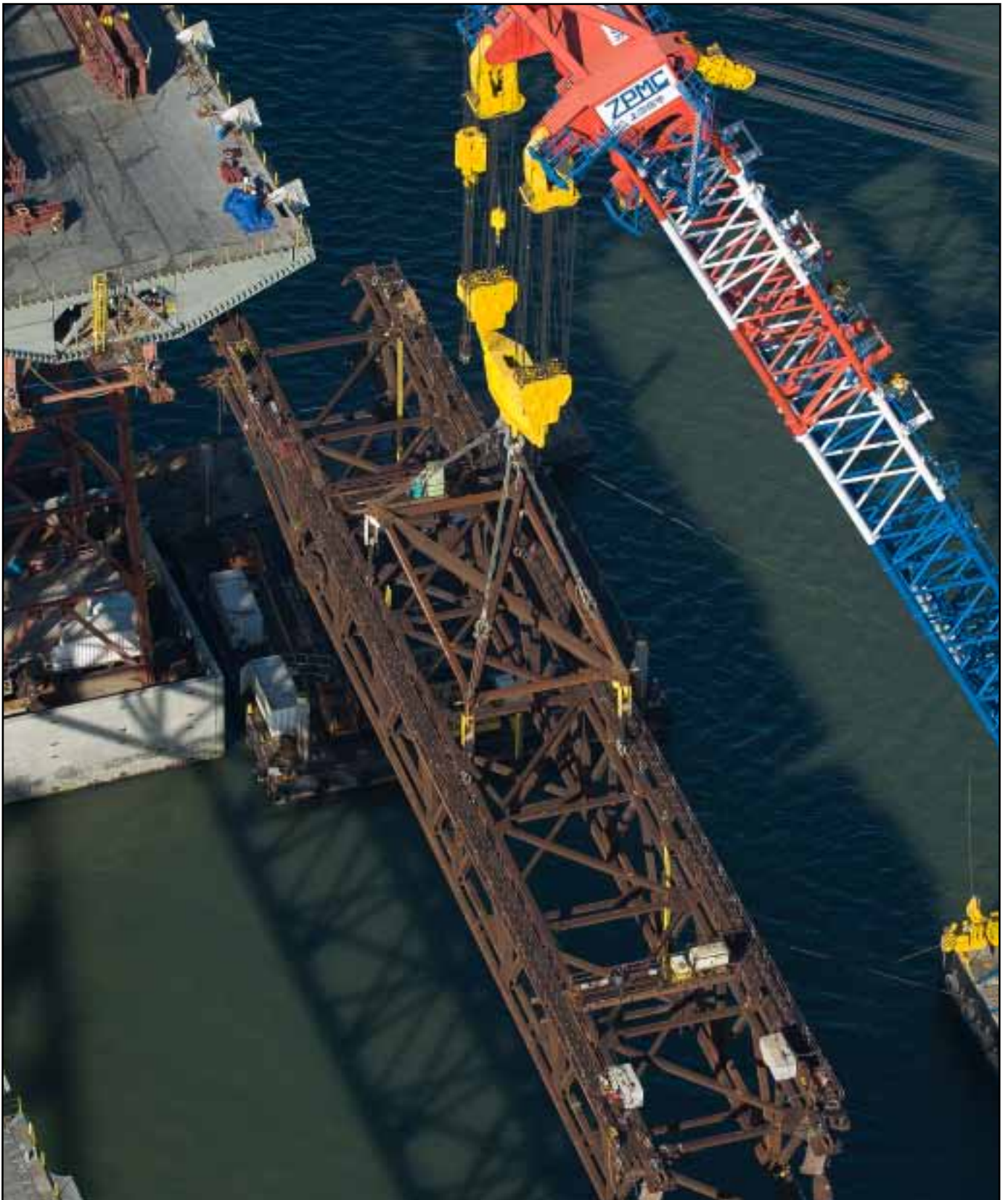


SAS Aerial View of the Shear-Leg Crane Barge Erecting the Last Section of the Westbound Temporary Support Structure Truss



SAS Aerial View of the Shear-Leg Crane Barge Erecting the Last Section of the Westbound Temporary Support Structure Truss





SAS Aerial View of the Shear-Leg Crane Barge Erecting the Last Section of the Westbound Temporary Support Structure Truss

## Appendix E: Project Progress Photographs

### 92/880 Interchange



Irrigation Crossover at Hesperian Blvd.



Eldridge Pedestrian Over Crossing





Overview of 92/880 Interchange

## Appendix F: Glossary of Terms

### Glossary of Terms

**AB144/SB 66 BUDGET:** The planned allocation of resources for the Toll Bridge Seismic Retrofit Program, or subordinate projects or contracts, as provided in Assembly Bill 144 and Senate Bill 66, signed into law by Governor Schwarzenegger on July 18, 2005 and September 29, 2005, respectively.

**BATA BUDGET:** The planned allocation of resources for the Regional Measure 1 Program, or subordinate projects or contracts as authorized by the Bay Area Toll Authority as of June 2005.

**APPROVED CHANGES:** For cost, changes to the AB144/SB 66 Budget or BATA Budget as approved by the Bay Area Toll Authority Commission. For schedule, changes to the AB 144/SB 66 Project Complete Baseline approved by the Toll Bridge Program Oversight Committee, or changes to the BATA Project Complete Baseline approved by the Bay Area Toll Authority Commission.

**CURRENT APPROVED BUDGET:** The sum of the AB144/SB66 Budget or BATA Budget and Approved Changes.

**COST TO DATE:** The actual expenditures incurred by the program, project or contract as of the month and year shown.

**COST FORECAST:** The current forecast of all of the costs that are projected to be expended so as to complete the given scope of the program, project, or contract.

**AT COMPLETION VARIANCE or VARIANCE (cost):** The mathematical difference between the Cost Forecast and the Current Approved Budget.

**AB 144/SB 66 PROJECT COMPLETE BASELINE:** The planned completion date for the Toll Bridge Seismic Retrofit Program or subordinate projects or contracts.

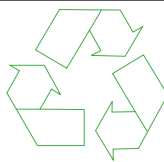
**BATA PROJECT COMPLETE BASELINE:** The planned completion date for the Regional Measure 1 Program or subordinate projects or contracts.

**PROJECT COMPLETE CURRENT APPROVED SCHEDULE:** The sum of the AB144/SB66 Project Complete Baseline or BATA Project Complete Baseline and Approved Changes.

**PROJECT COMPLETE SCHEDULE FORECAST:** The current projected date for the completion of the program, project, or contract.

**SCHEDULE VARIANCE or VARIANCE (schedule):** The mathematical difference expressed in months between the Project Complete Schedule Forecast and the Project Complete Current Approved Schedule.

**% COMPLETE:** % Complete is based on an evaluation of progress on the project, expenditures to date, and schedule.



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*The information in this report is provided in accordance with California Government code Section 755. This document is one of a series of reports prepared for the Bay Area Toll Authority (BATA)/Metropolitan Transportation Commission (MTC) for the Toll Bridge Seismic Retrofit and Regional Measure 1 Programs. The contract value for the monitoring efforts, technical analysis, and field site works that contribute to these reports, as well as the report preparation and production is \$1,574,873.73.*













**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** September 27, 2010

**FR:** Jason Weinstein, Senior Program Coordinator, BATA

**RE:** Agenda No. - 5a1

Item- San Francisco-Oakland Bay Bridge Project Updates  
SAS - Light Poles Procurement Update

---

**Recommendation:**

For Information Only

**Cost:**

N/A

**Schedule Impacts:**

N/A

**Discussion:**

In an effort to accelerate the procurement and fabrication of the light poles for the new Bay Bridge East Span Project, the TBPOC requested that BATA issue an Invitation for Bid (IFB) to procure the light poles for the entire East Span. Department staff will work together with BATA to oversee and administer the contract to fabricate the poles. There are 253 light poles to be fabricated for the entire East Span of the SFOBB including the SAS. The light fixtures are not part of this contract and will be procured separately.

In cooperation with the Department, BATA issued an IFB for the fabrication of the light poles in May, 2010. The engineer's estimate for the light poles was \$11.8 million. In response to the IFB, on August 11, 2010 two bids were received, as follows:

Bidder	Location	Bid Amount
Valmont Industries, Inc.	Valley, NE	\$2,888,910
Structures and Steel Products	Fort Worth, TX	\$5,560,725

The project budget includes a standard contingency of \$434,000, which is 15% of the low bid amount, to cover unknown project costs not included in the scope of work. The project budget also includes supplemental work funds of \$500,000. On September 8, 2010 the BATA Oversight Committee authorized BATA's Executive Director, or his designee,

## *Memorandum*

to issue a Purchase Order for fabrication and delivery of bridge lighting assemblies at San Francisco Oakland Bay Bridge East Span Replacement Bridge to Valmont.

On September 9, 2010 Valmont was issued a letter from BATA notifying them of the award of this purchase order and notice to proceed. However, the notice of award and notice to proceed were contingent on no protests being received. No protests were received.

A pre-construction meeting was held with Valmont Industries in the Bay Area on September 16<sup>th</sup> 2010. Valmont is in the process of preparing to perform the work of the contract and will begin with submittals in the near future.

**Attachment(s):**

N/A

## *Memorandum*

**TO:** Toll Bridge Oversight Committee (TBPOC)    **DATE:** September 27, 2010

**FR:** Tony Anziano, Toll Bridge Program Manager, Caltrans

**RE:** Agenda No. - 5a2  
Item San Francisco-Oakland Bay Bridge Project Updates  
SAS Contract - LED Light Fixture Procurement

---

**Recommendation:**

**APPROVAL**

**Cost:**

CCO No. 167: Not to Exceed \$1,200,000.00

**Schedule Impacts:**

None

**Discussion:**

Lighting for the new east span of the SFOBB is conveyed by approximately 1,180 light fixtures on the OTD, Skyway, SAS and YBITS structures with approximately 760 fixtures mounted on 253 light poles throughout the structures and the remaining 420 fixtures mounted on the cable, tower and bridge deck of the SAS structure. The original scope of work provided for metal halide light fixtures throughout.

In accordance with the Mechanical, Electrical & Piping (MEP) Integration Strategy memo which was approved by the TBPOC at the November 2008 meeting, BATA has recently awarded a contract to procure the steel light poles for the entire east span. The procurement of the light fixtures for these poles was eliminated from that contract by addendum to allow for the fixtures to be changed from metal halide lights to LED lights.

The elimination of the light fixtures from the BATA contract was approved by the TBPOC at the July 2010 meeting along with a funding transfer of \$3,500,000 from the BATA contract to the SAS contract to procure these fixtures. This funding addressed the 760 light fixtures mounted on light poles but not the 420 fixtures mounted on the SAS cable, tower and bridge deck. Change Order No. 167 will provide for these 420 fixtures to be changed from metal halide lighting to LED at a cost not to exceed \$1,200,000. This change will maintain the architectural consistency of the structure and be consistent with current Caltrans policy to move towards the lower energy consumption LED light.



Two LED light fixture suppliers have performed field demonstrations to date with one additional supplier scheduled for a third demonstration. Based on the result of these demonstrations and Department input, the contractor shall select one supplier to fabricate the 420 fixtures.

A chronology of the light poles and fixtures for the east span corridor is listed below:

**Chronology of SFOBB East Span Light Poles and Light Fixtures:**

- |            |  |
|------------|--|
| 2006       | Skyway Structure – Fabrication and installation of light poles eliminated from the contract due to constructability issues.  |
|            | Oakland Touchdown 1 – Fabrication and installation of Light poles and lighting fixtures eliminated from the contract prior to bid.   |
| 2007       | Yerba Buena Island Transition Structure 1 - Fabrication of Light poles and lighting fixtures eliminated from the contract prior to bid.  |
|            | Self-Anchored Suspension Structure - Fabrication of light poles and lighting fixtures eliminated from the contract by letter. Change Order No. 43 pending.   |
| Nov. 2008  | Light poles and pole mounted lighting fixtures for entire east span approved to be furnished by BATA procurement contract.   |
| June 2009  | Oakland Touchdown 1 – Prototype of light poles built and installed with metal halide fixtures and fixture lowering devices.  |
| July 2010  | Pole mounted light fixtures for entire east span eliminated from BATA procurement contract by addendum. Fixture lowering devices eliminated. Fixtures approved to be changed from metal halide to LED lights. Pole mounted LED lights to be furnished by SAS contract. (TBPOC Memo attached) |
| Sept. 2010 | BATA contract awarded to procure light poles for entire east span.   |

## *Memorandum*

Oct. 2010      Request for SAS cable, tower and deck mounted light fixtures to be changed from metal halide to LED lights.

**Attachment(s):**

1. TBPOC July 8, 2010 Memo for Pole Mounted Light Fixtures
2. Light Fixture Detailed Plan Sheets

## *Memorandum*

**TO:** Toll Bridge Oversight Committee (TBPOC)    **DATE:** July 8, 2010

**FR:** Tony Anziano, Toll Bridge Program Manager, Caltrans

**RE:** Agenda No. - 4d1  
Item                      Mechanical, Electrical & Piping (MEP) - Bridge Lighting  
Assembly Procurement Contract Addendum No. 1

---

**Recommendation:**  
**APPROVAL**

**Cost:**  
None

**Schedule Impacts:**  
None

**Discussion:**

In accordance with the Mechanical, Electrical & Piping (MEP) Integration Strategy memo which was approved by the TBPOC at the November 2008 meeting, BATA is currently advertising a contract to procure the bridge light assemblies (poles & fixtures) for the new SFOBB east span. It is proposed an addendum be issued with 5 items, 4 of which provide minor clarifications to the contract with the 5<sup>th</sup> item providing for the elimination of the procurement of the light fixtures from that contract.

The light fixtures would be eliminated in order to change the current metal halide light to a LED light. This change would be consistent with current Caltrans policies to move towards the lower energy consuming LED light. The change would also improve the quality of the bridge lighting which requires directional lights spanning across the 5 lanes of traffic from the center of the bridge.

The BATA procurement contract is scheduled for an August 2010 bid opening. It is anticipated that the procurement of the LED fixtures would be performed under the SAS contract. The estimated procurement cost of \$3,500,000 would be transferred from the funding previously approved for the BATA procurement contract to the SAS contract with no net cost impact. Cost savings from the previously eliminated fixture lowering system are anticipated to offset any increased cost of the LED fixtures.



## *Memorandum*

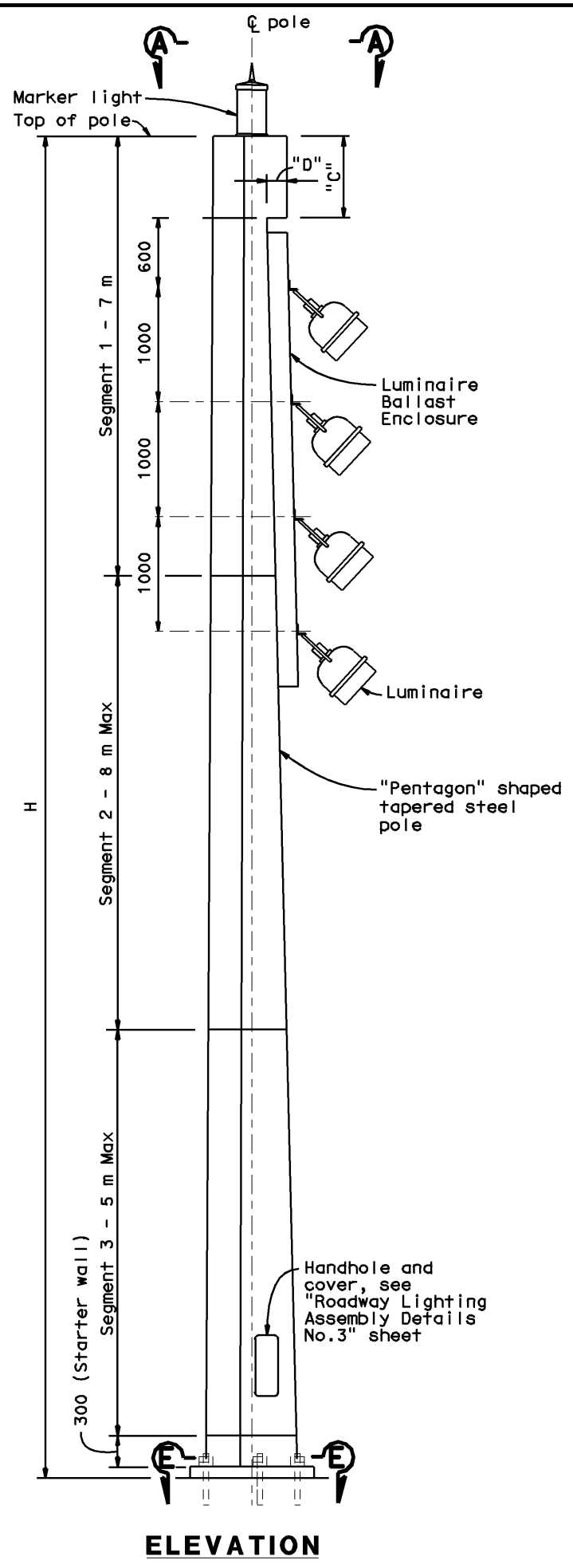
**Attachment(s):**

SFOBB MEP Integration Strategy Spreadsheet

# SFOBB MEP Integration Strategy (CONFIDENTIAL)

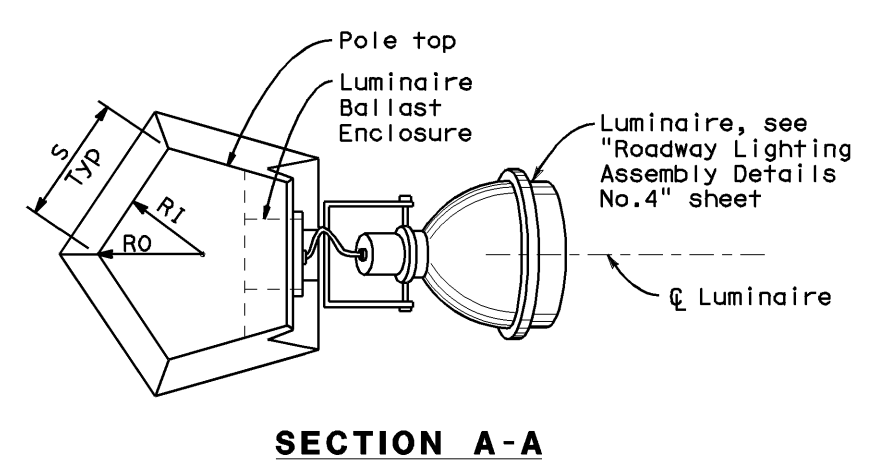
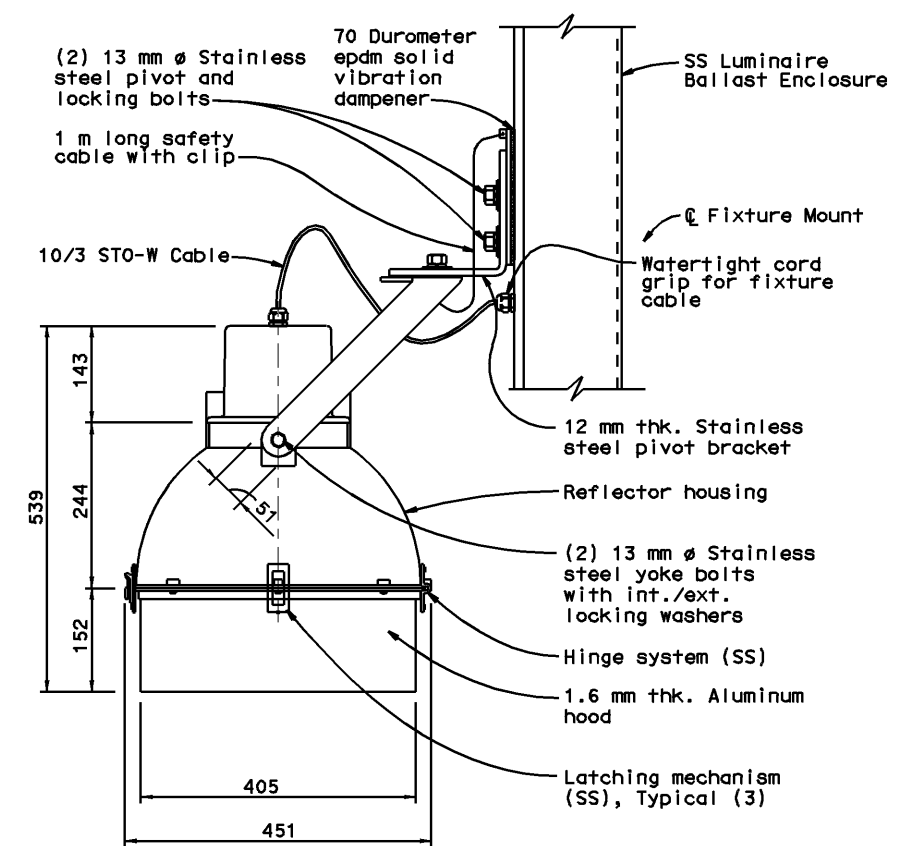
7/13/2010

	Segregation of Work	Approximate Costs	Revised Cost	Comments
A	Furnish Light Poles & Fixtures (BATA Contract)			
ITEM 1A	Furnish Light Poles & Fixtures (estimate is done by Caltrans Design)	\$15,300,000.00	\$11,800,000.00	Estimated cost savings of \$3,500,000 is anticipated due to elimination of the lowering device, all lighting fixtures and electrical components. LED light fixtures and all of electrical components will be added to item 1B below as part of installation CCO.
ITEM 2A	Storage Cost	\$1,500,000.00	\$1,500,000.00	No Change
	Contingency (Included in the above)			
	Total Estimated Cost To Furnish Light Poles & Fixtures (BATA Contract)	\$16,800,000.00	\$13,300,000.00	Reduced by \$3.5M
B	MEP Integration Work Installation (Proposed CCO to SAS)			
ITEM 1B	Install Light Poles (Skyway and OTD1)	\$2,000,000.00	\$5,500,000.00	Estimated cost increase of \$3,500,000 is added to this item for procurment and instaletion of light fixtures (LED fixtures) and all of the electrical components, which is being eliminated from BATA contact above.
ITEM 2B	Installation of MEP items eliminated from Skyway & OTD1	\$8,000,000.00	\$8,000,000.00	No Change
ITEM 3B	Upgrades & Revisions of the already installed components (Skyway & OTD1)	\$2,500,000.00	\$2,500,000.00	No Change
ITEM 4B	Installation of BASE System (conduits & Cabinets within Skyway & OTD1)	\$2,000,000.00	\$2,000,000.00	No Change
ITEM 5B	Contingency	\$2,900,000.00	\$2,900,000.00	No Change (contingency for revised cost on item 1B was included in that item)
	Total Estimated Cost For Installation	\$17,400,000.00	\$20,900,000.00	No Change
	Total for Light Poles & MEP Integration Work (within Skyway & OTD1)	\$34,200,000.00	\$34,200,000.00	No Change
C	System Wide Testing (Entire Corridor) (Proposed future CCO to SAS)			
ITEM 1C	System wide (Entire Corridor) testing, Relay Setting, SCADA development & commissioning	\$3,000,000.00		No Change
ITEM 2C	Resolution of system wide testing issues (for entire corridor)	\$1,500,000.00		No Change
ITEM 3C	Contingency (20%)	\$900,000.00		No Change
	Total Estimated Cost Of System wide Testing	\$5,400,000.00		No Change
D	Complete BASE System (Entire Corridor)			
ITEM 1D	Hardware (about 150 cameras, interface box and decoder for each camera / wiring)	\$3,000,000.00		No Change
ITEM 2D	Installation cost (Camera & Hardware)	\$1,500,000.00		No Change
ITEM 3D	New dedicated fiber line in both structures with 2 loops (installed)	\$2,000,000.00		No Change
ITEM 4D	Contingency (20%)	\$1,300,000.00		No Change
	Total Estimated Cost for BASE System	\$7,800,000.00		No Change
	Total Additional Funds Needed	\$13,200,000.00		No Change



# LIGHT POLE FIXTURES

(Qty = 48)



Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SF	80	13.2/13.9		

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

REG. ELEC. PROFESSIONAL ENGINEER

No.

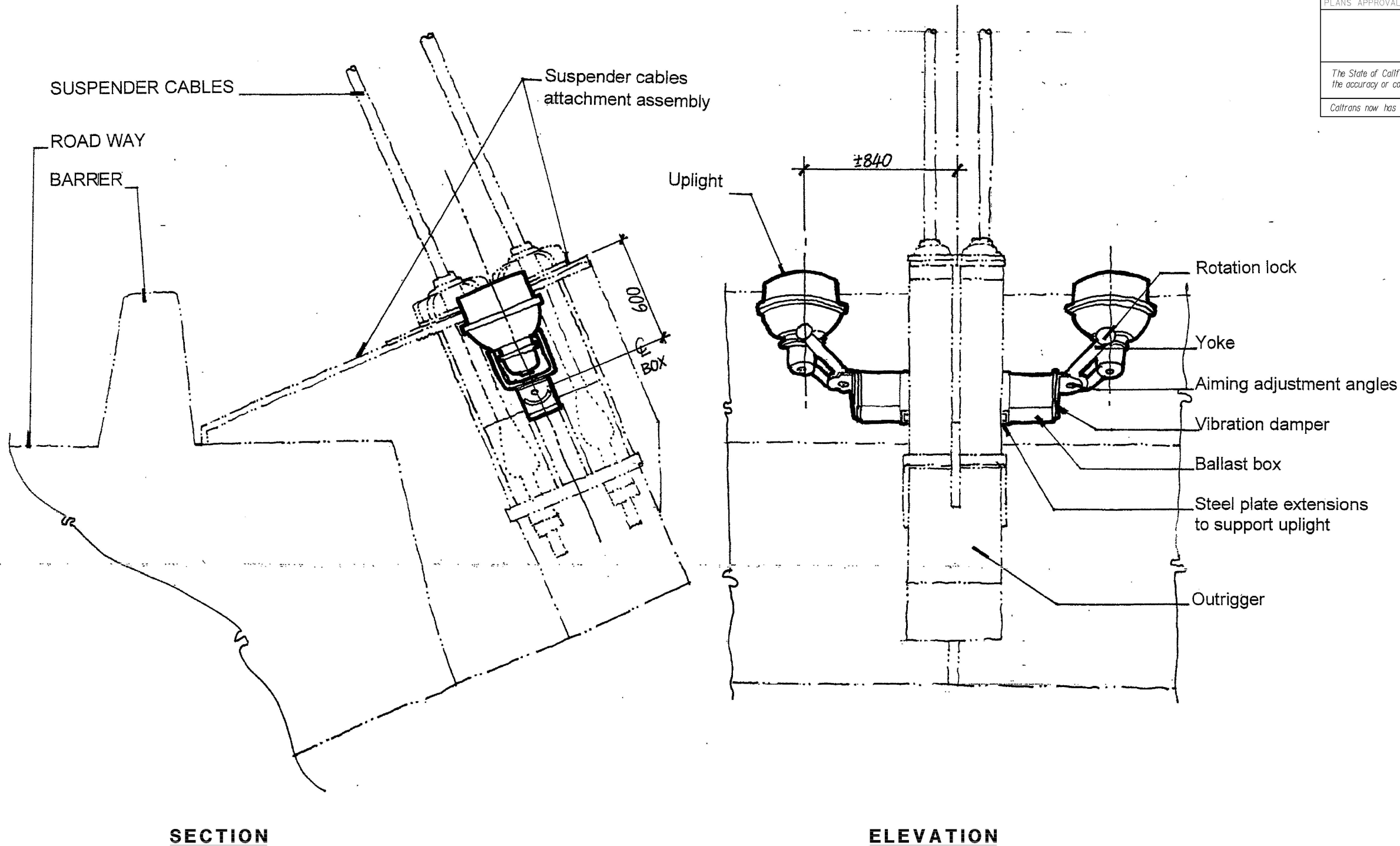
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STATE OF CALIFORNIA





<div>STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION</div> <div></div>	DESIGN OVERSIGHT		CALCULATED/ DESIGNED BY	FW	DATE 11/01	REVISED BY				
	BEHZAD GOLEMOHAMMADI					DATE				
						11/01				
						11/01				
			CHECKED BY	PF		DATE REVISED				



# CABLE UP-LIGHTS (Qty = 166)

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	13.2/13.9		
<div> <div> <div>Caltrans</div> <div>Metric</div> </div> </div>					
REGISTERED ELECTRICAL ENGINEER			DATE		
PLANS APPROVAL DATE			<div> <div> <div>REGISTERED PROFESSIONAL ENGINEER</div> <div>No.</div> <div>EXP. ELECTRICAL</div> <div>STATE OF CALIFORNIA</div> </div> </div>		
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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION		DESIGN OVERSIGHT		CALCULATED/ DESIGNED BY		DATE		REVISED BY		DATE	
		BEHZAD GOLEMOHAMMADI		FW		11/01		FW		11/01	
				PF		11/01		PF		11/01	





## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** September 27, 2010

**FR:** Tony Anziano, Toll Bridge Program Manager, Caltrans

**RE:** Agenda No. - 5b1  
Item- San Francisco-Oakland Bay Bridge Updates  
Yerba Buena Island (YBI) Detour Update

---

**Recommendation:**

For Information Only

**Cost:**

N/A

**Schedule Impacts:**

N/A

**Discussion:**

A verbal update on the Yerba Buena Island Detour contract will be provided at the October 7<sup>th</sup> meeting.

**Attachment(s):**

N/A

## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** September 27, 2010

**FR:** Tony Anziano, Toll Bridge Program Manager, Caltrans

**RE:** Agenda No. - 5c1

Item- San Francisco-Oakland Bay Bridge Project Updates  
YBITS No. 1 – CCO

---

**Recommendation:**

For Information Only

**Cost:**

No cost to the Department. All costs for this CCO will be borne by the San Francisco County Transportation Authority as agreed to in executed Cooperative Agreement 4-2283.

**Schedule Impacts:**

None

**Discussion:**

This CCO makes provisions for the potential connection of the planned YBI Westbound (WB) on and off ramps on the west side of YBI. In March 2010, the Department executed Cooperative Agreement # 4-2283 with the San Francisco County Transportation Authority (Authority) to cover the costs with incorporating said provisions. The first portion of these provisions was included in an YBITS1 construction plan addendum # 8 that the Department issued as part of the YBITS1 advertisement process. This CCO is in addition to the Addendum and is necessary in order to facilitate connection of the WB on-off ramps in the future. Addendum 8 costs were established at \$386,450. This CCO is estimated at \$184,035. The estimated total capital cost of \$570,485 (Addendum plus CCO) is below the estimated \$650,000 construction capital cost estimate as agreed to in the executed Cooperative Agreement.

The previously approved and executed YBITS1 addendum # 8 covered only the connection reinforcement and rebar couplers for the ramps as defined in the initial unchecked design. The requested CCO details are necessary to incorporate the final approved design details that modify the location of the addendum reinforcement, and to

## *Memorandum*

construct minor temporary modifications to the edge of deck, bent cap and intermediate diaphragms along the north side of the mainline structure. The temporary north side edge of deck modifications are considered compatible with the mainline bridge aesthetics and have been developed in close coordination with Caltrans Bay Bridge Architects, Clive Endress and Donald MacDonald.

In summary, this CCO is necessary to ensure the WB Ramps are not precluded from connecting to the mainline structure at a later date and to minimize disruption to the public during the future ramp connection. The potential for cost savings is best if the CCO negotiations can get started as soon as possible since the contractor is now in the early stages of planning his work and getting all shop drawings approved for the mainline structures.

### **Attachment(s):**

1. Cooperative Agreement # 4-2283
2. Structural Quantity and Marginal Estimate Sheet
3. Typical Structural CCO Edge of Deck Modifications
4. Edge of Deck Modifications at the Westbound Off & Onramp



COOPERATIVE AGREEMENT

THIS AGREEMENT, ENTERED INTO EFFECTIVE ON March 24, 2010, is between the STATE OF CALIFORNIA, acting by and through its Department of Transportation, referred to herein as "STATE," and the

SAN FRANCISCO COUNTY TRANSPORTATION  
AUTHORITY, a public corporation, referred to  
herein as "AUTHORITY".

RECITALS

1. STATE and AUTHORITY, pursuant to Streets and Highways Code section 114 and 131, are authorized to enter into a Cooperative Agreement for improvements to State and local highways within the City and County of San Francisco.
2. STATE is constructing the new San Francisco-Oakland Bay Bridge (SFOBB) Transition Structure, referred to herein as "IMPROVEMENTS" as part of the East Span Seismic Safety Project. To accommodate the construction of the new Yerba Buena Island (YBI) ramps (designed by AUTHORITY under cooperative agreement no. 4-2137) which are comprised of a new westbound onramp connecting to the new SFOBB East Span just prior to the tunnel and a new westbound off-ramp connecting to the new SFOBB East Span between bents W3 and W5 and between bents W9L and W10AL, AUTHORITY requests to add additional steel reinforcements, steel couplers and minor concrete to accommodate the future connection of the new ramps along with loop detectors to the new SFOBB East Span, referred to herein as "BETTERMENTS." The BETTERMENTS are in the superstructure of the new SFOBB and located above ground. The BETTERMENTS will be constructed via contract change order and contract addendum to the YBI Transition Structure #1 Contract (Contract 04-0120S4).
3. AUTHORITY has prepared contract plans for BETTERMENTS and desires to have STATE administer the construction contract for BETTERMENTS.
4. It is mutually beneficial to combine said IMPROVEMENTS and BETTERMENTS into a single construction contract, referred to herein as "PROJECT."
5. AUTHORITY is willing to pay for all actual construction capital costs and a not to exceed lump sum amount for support costs that will be incurred by STATE to construct BETTERMENTS on AUTHORITY's behalf.
6. The parties now desire to specify herein below the terms and conditions under which BETTERMENTS are to be financed and constructed.

SECTION I

STATE AGREES:

1. To review and approve all plans, specifications and estimates (PS&E) prepared by AUTHORITY for BETTERMENTS portion of PROJECT.
2. To advertise, award, and administer the construction contract for BETTERMENTS as a part of PROJECT.
3. To establish separate PROJECT accounts to accumulate charges for all costs to be paid by AUTHORITY pursuant to this Agreement as shown in Exhibit A, attached to and made a part of this Agreement.
4. To submit a billing in the lump sum amount of \$65,000 to AUTHORITY fifteen (15) days prior to STATE's bid advertising date of a construction contract for PROJECT. Said billing shall represent AUTHORITY's not to exceed contribution towards cost of construction support for BETTERMENTS as described in Article 1 of Section II and shown on Exhibit A.
5. To submit a billing in the amount of \$650,600 to AUTHORITY thirty (30) days prior to STATE's award date of a construction contract for PROJECT. Said initial billing represents AUTHORITY's total estimated construction capital cost for BETTERMENTS, exclusive of claims and excluding costs referred to in Section II, Article 2.
6. To make all necessary arrangements with the owners of public or private utility facilities which could conflict with construction of BETTERMENTS in accordance with applicable law, the provisions of any franchise, master contracts or other agreements in effect with the respective utility owners. STATE shall prepare the necessary notices and/or Utility Agreements to relocate and inspect the required utility relocation work.
7. To pay for utility adjustments, including engineering and overhead costs, for the IMPROVEMENTS portion of PROJECT only.
8. Upon completion of PROJECT and all work incidental thereto, to furnish AUTHORITY with a detailed statement of the total actual BETTERMENTS costs, including the costs of any claims related to the construction contract which have been allowed to the construction contractor pursuant to the construction contract administrative claims process or arbitration and all claims-related defense costs incurred by STATE. STATE thereafter shall refund to AUTHORITY promptly after completion of STATE's final accounting of costs for BETTERMENTS any amount of AUTHORITY's construction capital payments remaining after actual costs to be borne by AUTHORITY have been deducted or STATE shall invoice AUTHORITY for any additional amounts required to complete AUTHORITY's financial obligations assumed pursuant to this Agreement.
9. To retain, or cause to be retained for audit by AUTHORITY's auditors, for a period of three (3) years from date of processing the final payment under this Agreement, all records and accounts relating to BETTERMENTS, and make such materials available at STATE's District 4 Office and copies thereof shall be furnished to AUTHORITY, if requested by AUTHORITY.



SECTION II

AUTHORITY AGREES:

1. To deposit with STATE within twenty-five (25) days of receipt of billing therefor (which billing will be forwarded fifteen (15) days prior to STATE's bid opening date of a construction contract for PROJECT), the lump sum amount of \$65,000. Said figure represents AUTHORITY's not to exceed contribution towards cost of construction support work for BETTERMENTS. Said BETTERMENTS support costs shall include costs of providing personnel resources and their equipment and all direct and indirect costs (functional and administrative overhead assessment) attributable to BETTERMENTS support applied in accordance with STATE's standard accounting practices and procedures. AUTHORITY agrees that this lump sum amount is not to be construed as a percentage of the construction capital cost estimate to be used for negotiations to reimburse STATE's support costs on future agreement(s).
2. To bear one hundred percent (100%) of the total actual BETTERMENTS capital construction cost, estimated to be \$650,600, including the cost of materials furnished by STATE, supplemental work, change orders, claims related solely to the construction contract for the BETTERMENTS paid to the construction contractor, including those paid as a result of STATE's administrative claims process and/or as an award in arbitration, and the cost of STATE's defense of all PROJECT-related claims due solely to BETTERMENTS which may be filed by said contractor. The actual capital construction costs of BETTERMENTS shall be determined only after completion of all work, the closure of all claims, and upon final accounting of all costs for PROJECT.
3. To deposit with STATE within twenty-five (25) days of receipt of billing therefor, (which billing will be forwarded thirty (30) days prior to STATE's award date of a construction contract for PROJECT), the amount of \$650,600, which figure represents AUTHORITY's initial deposit for the total estimated construction capital cost for BETTERMENTS, exclusive of claims and excluding costs referred to in Article 7 of this Section II.
4. No federal funds will be used towards BETTERMENTS cost.
5. To prepare all plans for BETTERMENTS, at AUTHORITY expense, and to submit each to STATE for review and approval for compatibility with STATE's IMPROVEMENTS plans.
6. To identify and locate all utility facilities within the BETTERMENTS area as part of its design responsibility. All facilities not relocated or removed in advance of PROJECT construction shall be identified on the BETTERMENTS plans and specifications.
7. To pay costs for utility adjustments made by STATE to accommodate construction of BETTERMENTS, including STATE's engineering and overhead costs.
8. If any additional or extra work over and above that specifically provided for herein to construct BETTERMENTS is needed, such work shall be at AUTHORITY's sole expense and be accomplished by an executed Amendment to this agreement for a construction contract change order or any other method deemed appropriate by STATE after receipt of deposit of funds by AUTHORITY to cover the cost of such work.
9. To pay state upon completion of all work and within twenty-five (25) working days of receipt of a detailed statement made upon final accounting of construction costs therefore, any amount over and above the aforementioned deposits and payments



required to complete AUTHORITY's financial obligation undertaken pursuant to this agreement.

### SECTION III

#### IT IS MUTUALLY AGREED:

1. STATE's contractual obligations are subject to the annual State Budget Act authority, the appropriation of appropriate resources by the Legislature, and the allocation of required funds by the California Transportation Commission.
2. AUTHORITY's total obligation for the cost of BETTERMENTS, including the \$65,000 not to exceed lump sum obligation for construction support costs is estimated at \$715,600. The total obligation may be increased to cover actual construction capital costs in excess of the initial estimated total construction costs of BETTERMENTS. Such increase in total obligation will be incorporated only upon written amendment to this Agreement.
3. If the expenses for the BETTERMENTS goes beyond the AUTHORITY's named estimated contribution, STATE shall stop work on BETTERMENTS and restore the site to a condition of safe operation, using any then unexpended funds for BETTERMENTS until additional funds are procured and made available for BETTERMENTS and this Agreement is amended accordingly. Similarly, STATE is under no obligation to continue work on BETTERMENTS if AUTHORITY fails to pay STATE's invoices under Section II.
4. STATE shall not award a contract to construct PROJECT until this Agreement is fully executed and after receipt of AUTHORITY's deposits required in Section II of this Agreement
5. Prior to advertising for bids for the construction contract for PROJECT, AUTHORITY may terminate this Agreement by written notice, provided that AUTHORITY pays STATE for all costs already incurred, including work performed by STATE prior to the effective date of this agreement, and all unavoidable costs related to termination of BETTERMENTS under the terms of this agreement.
6. Prior to advertising for bids for the construction contract for PROJECT, STATE may terminate this Agreement by written notice. STATE is only responsible to return unspent amounts.
7. After opening bids for construction of PROJECT, AUTHORITY's estimate of construction capital cost will be revised based on actual bid prices. AUTHORITY's required deposit under Section II, Article 3 will be increased or decreased to match said revised estimate. If the deposit increase or decrease is less than \$5,000, no refund or demand for additional deposit will be made until final accounting.
8. The cost of any construction engineering referred to herein in this Agreement shall include all direct and indirect costs (functional and administrative overhead assessment) attributable to such work, applied in accordance with STATE's standard accounting practices.
9. Construction of BETTERMENTS referred to herein may require alterations, deviations, additions to or omissions from STATE's PS&E, including an increase or decrease of quantities in items of work. Any such changes shall be accomplished in accordance

with STATE's Standard Specifications and Special Provisions in STATE's construction contract. STATE shall proceed with all changes to BETTERMENTS as needed to construct PROJECT up to an aggregate amount of \$10,000 without notifying AUTHORITY's representative before authorizing contractor to begin work on these changes. STATE will notify AUTHORITY's representative and solicit comments before authorizing contractor to begin work on changes above the aggregate amount of \$10,000 and AUTHORITY shall have all comments returned to STATE within three (3) working days for STATE to consider those comments, if any.

10. STATE grants to AUTHORITY or its representatives, at no cost to STATE, the right to inspect the BETTERMENTS portion of PROJECT as it progresses. Upon completion of BETTERMENTS construction, AUTHORITY reserves the right to perform an independent final inspection of BETTERMENTS.
11. In the construction of PROJECT, AUTHORITY may at no cost to STATE, furnish a representative, if it so desires. AUTHORITY's assigned representative shall have no direct contact with STATE's contractor, the public, other local agencies, etc., without prior consent of STATE's Resident Engineer. Said representative and STATE's Resident Engineer will cooperate and consult with each other, but the decisions of STATE's Resident Engineer shall prevail as final, binding and conclusive in all matters concerning the PROJECT construction contract.
12. STATE shall designate a Project Manager to represent STATE and AUTHORITY shall designate in writing a representative through whom all communications between the two agencies shall be channeled.
13. STATE's construction contract claims process will be used with STATE acting as the lead agency in consultation with AUTHORITY. AUTHORITY shall abide by the outcome of said claims process. In the event that arbitration under the provisions of Public Contract Code section 10240 et seq. results from the contract claims process, STATE will act as lead agency in Arbitration unless otherwise agreed by STATE and AUTHORITY.
14. If unanticipated cultural, archaeological, paleontological or other protected materials or resources are encountered during PROJECT construction, STATE shall stop work in that area until a qualified professional can evaluate the nature and significance of the find and a plan is approved for the removal or protection of that material. The costs for any removal or protection of that material in the BETTERMENTS shall be covered as a BETTERMENTS cost contemplated by this Agreement.
15. The party that discovers HM will immediately notify the other party to this Agreement.

HM-1 is defined as hazardous material (including but not limited to hazardous waste) that requires removal and disposal pursuant to federal or state law, whether it is disturbed by PROJECT or not.

HM-2 is defined as hazardous material (including but not limited to hazardous waste) that may require removal and disposal pursuant to federal or state law, only if disturbed by PROJECT.

16. STATE, independent of PROJECT, is responsible for any HM-1 found within existing SHS right of way. STATE will undertake HM-1 management activities with minimum impact to PROJECT schedule and will pay all costs associated with HM-1 management activities.



STATE has no responsibility for management activities or costs associated with HM-1 found outside the existing SHS right of way. If HM-1 is found outside existing SHS right of way, responsibility for such HM-1 rests with the owner(s) of the parcel(s) on which the HM-1 is found. AUTHORITY, in concert with the local agency having land use jurisdiction over the parcel(s), will ensure that HM-1 management activities are undertaken with minimum impact to PROJECT schedule. Independent of PROJECT, all costs for management activities related to HM-1 found outside the existing SHS right of way will be the responsibility of the owner(s) of the parcel(s) where the HM-1 is located.

17. If HM-2 is found within the limits of PROJECT, the public agency responsible for advertisement, award, and administration (AAA) of the PROJECT construction contract will be responsible for HM-2 management activities. Any management activity cost associated with HM-2 is a PROJECT construction cost.
18. Management activities associated with either HM-1 or HM-2 include, without limitation, any necessary manifest requirements and designation of disposal facility.
19. STATE'S acquisition of or acceptance of title to any property on which any hazardous material is found will proceed in accordance with STATE'S policy on such acquisition.
20. If, during the performance of PROJECT construction, new information is obtained which requires the preparation of additional environmental documentation pertaining to BETTERMENTS to comply with CEQA and if applicable, NEPA, this Agreement will be amended to include completion of those additional tasks.
21. Upon completion and acceptance of the PROJECT construction contract by STATE, STATE will accept control of and maintain BETTERMENTS at its own cost and expense.
22. Upon completion of STATE's PROJECT, ownership and title to materials, equipment, and appurtenances installed within the SHS right of way for SHS operations will automatically be vested in STATE, and materials, equipment, and appurtenances installed outside of the SHS right of way will automatically be deemed to be under the control of AUTHORITY or an appropriate third party as determined by AUTHORITY. No further agreement will be necessary to transfer ownership as hereinbefore stated.
23. Nothing in the provisions of this Agreement is intended to create duties or obligations to or rights in third parties not parties to this Agreement or to affect the legal liability of either party to the Agreement by imposing any standard of care with respect to the development, design, construction, operation or maintenance of the SHS and the AUTHORITY BETTERMENTS different from the standard of care imposed by law.
24. Neither STATE nor any officer or employee thereof is responsible for any injury, damage or liability occurring by reason of anything done or omitted to be done by AUTHORITY under or in connection with any work, authority or jurisdiction conferred upon AUTHORITY under this Agreement. It is understood and agreed that AUTHORITY will fully defend, indemnify and save harmless STATE and all its officers and employees from all claims, suits or actions of every name, kind and description brought forth under, including, but not limited to, tortious, contractual, inverse condemnation or other theories or assertions of liability occurring by reason of anything done or omitted to be done by AUTHORITY under this Agreement.



25. Neither AUTHORITY nor any officer or employee thereof is responsible for any injury, damage or liability occurring by reason of anything done or omitted to be done by STATE under or in connection with any work, authority, or jurisdiction conferred upon STATE under this Agreement. It is understood and agreed that STATE will fully defend, indemnify and save harmless AUTHORITY and all its officers and employees from all claims, suits or actions of every name, kind and description brought forth under, including, but not limited to, tortious, contractual, inverse condemnation or other theories or assertions of liability occurring by reason of anything done or omitted to be done by STATE under this Agreement.
26. No alteration or variation of the terms of this Agreement shall be valid unless made in writing and signed by the parties hereto by way of an amendment and no oral understanding or agreement not incorporated herein shall be binding on any of the parties hereto.
27. This Agreement may be terminated or provisions contained herein may be altered, changed, or amended by mutual consent of the parties hereto.
28. Except as otherwise provided in Article 5, of this Section III, those portions of Agreement pertaining to the construction of BETTERMENTS shall terminate upon completion and acceptance of the construction contract for PROJECT by STATE, or on December 31, 2014, whichever is earlier in time; however, the ownership, operation, maintenance, liability, and claims clauses shall remain in effect until terminated or modified in writing, by mutual agreement. Should any construction-related claim arising out of PROJECT be asserted against STATE, AUTHORITY agrees to extend the termination date of this Agreement and provide additional funding as required to cover AUTHORITY's proportionate share of costs or execute a subsequent agreement to cover those eventualities.

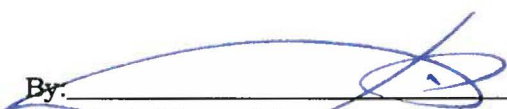
29. Except as otherwise specifically provided in this Agreement, wherever in this Agreement STATE or AUTHORITY is required or requested to give its consent or approval to any matter or action by the other, such consent or approval shall not be unreasonably withheld or delayed and the reasons for disapproval of consent shall be stated in reasonable detail in writing.

STATE OF CALIFORNIA  
Department of Transportation

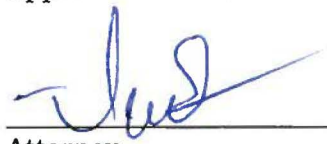
SAN FRANCISCO COUNTY  
TRANSPORTATION AUTHORITY

RANDELL H. IWASAKI  
Director

By:   
Deputy District Director

By:   
Jose Luis Moscovich  
Executive Director

Approved as to form and procedure:

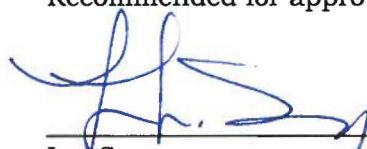
  
Attorney  
Department of Transportation

Attest:   
AUTHORITY Clerk

Certified as to budgeting of funds:

  
District Budget Manager

Recommended for approval:

  
Lee Saage  
Deputy Director, Capital Projects

Certified as to financial terms and conditions:

  
Accounting Administrator

Approved as to form:

  
AUTHORITY Legal Counsel

EXHIBIT A

COST OF AUTHORITY's BETTERMENTS WORK TO BE PERFORMED BY STATE

REIMBURSED WORK	LUMP SUM	ESTIMATE	TOTAL
CONSTRUCTION SUPPORT	\$65,000		
CONSTRUCTION CAPITAL		\$650,600	
<b>TOTAL</b>	<b>\$65,000</b>	<b>\$650,600</b>	<b>\$715,600</b>





RESOLUTION AUTHORIZING THE EXECUTIVE DIRECTOR TO EXECUTE COOPERATIVE AGREEMENTS (NO. 4-2283 AND 4-2137) WITH CALTRANS IN A COMBINED TOTAL NOT TO EXCEED \$1,465,000; TO AMEND THE MEMORANDUM OF AGREEMENT WITH THE TREASURE ISLAND DEVELOPMENT AUTHORITY; AND TO REDUCE THE PROFESSIONAL SERVICES CONTRACT WITH AECOM BY \$1,465,000 FOR THE YERBA BUENA ISLAND RAMPS IMPROVEMENT PROJECT

WHEREAS, The Treasure Island Development Authority (TIDA) has requested that the San Francisco County Transportation Authority (Authority) be the lead agency for the Yerba Buena Island (YBI) Ramps Project; and

WHEREAS, Office of Economic and Workforce Development (OEWD), representing TIDA, is working jointly with the Authority on managing the work of the AECOM consultant team (formerly DMJM Harris) to prepare and secure the approval of an Environmental Impact Report/Environmental Impact Study (EIR/EIS) for the new replacement YBI Ramps; and

WHEREAS, The Authority entered into a Memorandum of Agreement (MOA) with TIDA in July 2008, in an amount not to exceed \$3,000,000 plus accrued interest, for the preparation of the project report and the environmental document studies and services; and

WHEREAS, The Authority approved an amendment to the MOA with TIDA in May 2009, to increase the authorized amount to \$8,800,000 and an amendment to AECOM professional services contract; and

WHEREAS, In order to build the YBI ramps in conjunction with the new Eastern Span of the San Francisco – Oakland Bay Bridge (SFOBB), two critical Cooperative Agreements (No. 4-2283 and 4-2137) need to be executed with Caltrans in the amounts of \$715,000 and \$750,000, respectively; and



WHEREAS, TIDA has requested that the Authority execute the Cooperative Agreements with Caltrans and a corresponding amendment to MOA to allow for reimbursement of Caltrans estimated capital and support costs; and

WHEREAS, In addition, TIDA has requested that the Authority amend the terms of the existing AECOM contract consistent with the proposed MOA amendment, where the TIDA MOA-authorized amount of \$8,800,000 will not be increased at this time, but instead funds will be temporarily shifted from the AECOM professional services contract line item; and

WHEREAS, AECOM professional services contract amendment will reduce the contract amount by \$1,465,000 to \$6,835,000, and once drafted, it will be executed consistent with the terms of the proposed TIDA MOA amendment; and

WHEREAS, Under the MOA, TIDA is responsible for reimbursing the Authority for all costs, including the costs of any advancement of Authority funds; and

WHEREAS, At its September 23, 2009 meeting, the Citizens Advisory Committee was briefed on the subject request and unanimously adopted a motion of support for the staff recommendation; and

WHEREAS, At its October 6, 2009 meeting, the Finance Committee reviewed the subject request and unanimously recommended approval of the staff recommendation; now, therefore, be it

RESOLVED, That the Executive Director is hereby authorized to execute cooperative agreements (No. 4-2283 and 4-2137) with Caltrans in a combined total not to exceed \$1,465,000; to amend the memorandum of agreement with the Treasure Island Development Authority; and to reduce the professional services contract with AECOM by \$1,465,000 for the Yerba Buena Island Ramps Improvement Project; and be it further

RESOLVED, That the Executive Director is hereby authorized to negotiate the non-monetary terms and conditions of this Memorandum of Agreement.

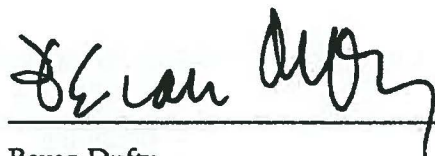


The foregoing Resolution was approved and adopted by the San Francisco County Transportation Authority at a regularly scheduled meeting thereof, this 27<sup>th</sup> day of October 2009, by the following votes:

**Ayes:** Commissioners Avalos, Chiu, Chu, Daly, Dufty, Mar and Mirkarimi (7)


**Nays:** (0)

**Absent:** Commissioners Alioto-Pier, Campos, Elsbernd and Maxwell (4)

  
\_\_\_\_\_  
Bevan Dufty  
Chairperson

10/28/09  
Date

ATTEST:

  
\_\_\_\_\_  
José Luis Moscovich  
Executive Director

10/28/09  
Date



DEPARTMENT OF TRANSPORTATION

**STRUCTURAL QUANTITY AND MARGINAL ESTIMATE**

DPD-OSD-D19 (REV.1/78)

Moffatt &amp; Nichol Engineers

6/14/10

CHARGE		EX AUTH	012011	BR. NO.	34-0006 L/R		
BRIDGE	SFOBB - YBITS #1 - ADDENDUM 8 DUE TO WB RAMP CHANGES					TYPE	
DISTRICT	04	COUNTY	SF, Ala	ROUTE	80	POST KM	9.01
LENGTH	WB 461.293m; EB 452.511m	WIDTH	VARIES	DEPTH	VARIES	LL	
LONG SPAN	84.800 m	SPAN		SKEW			
DESIGN SECTION	EFPB						

Rec'd Est Group by

Quantities by

Revised

JNB

Date 06/14/10

CODE	(S-F)	CONTRACT ITEMS	UNIT	SUPERSTRUCTURE			SUBSTRUCTURE			OTHER			TOTALS	UNIT PRICE from BEES	AMOUNT
				QUANTITY	CHECK	USE	QUANTITY	CHECK	USE	QUANTITY	CHECK	USE	USE		
510053	F	STRUCTURAL CONCRETE, BRIDGE	M3	190		190							190	\$855.00	\$162,450
520102	P-F-S	BAR REINFORCING STEEL (BRIDGE)	KG	120,000		120,000							120,000	\$1.70	\$204,000
SUB TOTAL															\$366,450

ADDENDUM 8

DEPARTMENT OF TRANSPORTATION

**STRUCTURAL QUANTITY AND MARGINAL ESTIMATE**

DPD-OSD-D19 (REV.1/78)

Moffatt &amp; Nichol Engineers

6/14/10

CHARGE			EX AUTH	012011	BR. NO.	34-0006 L/R	
BRIDGE	SFOBB - YBITS #1 - CCO COSTS DUE TO WB RAMP CHANGES					TYPE	
DISTRICT	04	COUNTY	SF, Ala	ROUTE	80	POST KM	9.01
LENGTH	WB 461.293m; EB 452.511m		WIDTH	VARIES	DEPTH	VARIES	LL
LONG SPAN	84.800 m		SPAN		SKEW		
DESIGN SECTION	EFPB						

Rec'd Est Group by

Quantities by

Revised

JNB

Date 06/14/10

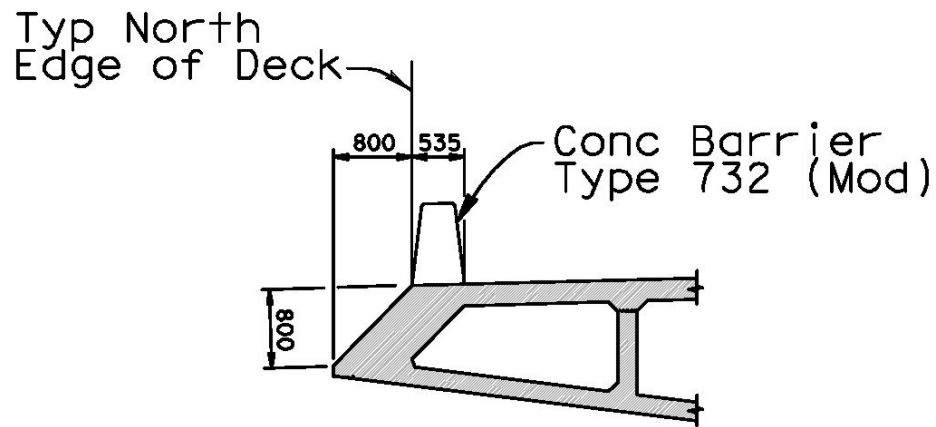
CODE	(S-F)	CONTRACT ITEMS	UNIT	SUPERSTRUCTURE			SUBSTRUCTURE			OTHER			TOTALS	UNIT PRICE from BEES	AMOUNT
				QUANTITY	CHECK	USE	QUANTITY	CHECK	USE	QUANTITY	CHECK	USE	USE		
14946	S	INSTALL LIGHT POLE AND FIXTURES	EA	-5		-5							-5	\$3,570.00	(\$17,850)
490566	-	FURNISH STEEL PILING (HP 360X132)	M	41		41							41	\$150.00	\$6,150
490567	S	DRIVE STEEL PILE (HP 360X132)	EA	3.4		3.4							3.4	\$900.00	\$3,060
510053	F	STRUCTURAL CONCRETE, BRIDGE	M3	105		105							105	\$855.00	\$89,775
520102	P-F-S	BAR REINFORCING STEEL (BRIDGE)	KG	35,000		35,000							35,000	\$1.70	\$59,500
750501	S-F	MISCELLANEOUS METAL (BRIDGE)	KG	7,100		7,100							7,100	\$20.00	\$142,000
750505	P-F-S	BRIDGE DECK DRAINAGE SYSTEM	KG	-1,320		-1,320							-1,320	\$20.00	(\$26,400)
833080A	F	CONCRETE BARRIER (TYPE K)	M	190		190							190	\$20.00	\$3,800
839717	F	CONCRETE BARRIER (TYPE 732 MOD)	M	-190		-190							-190	\$400.00	(\$76,000)
SUB TOTAL															\$184,035

CCO

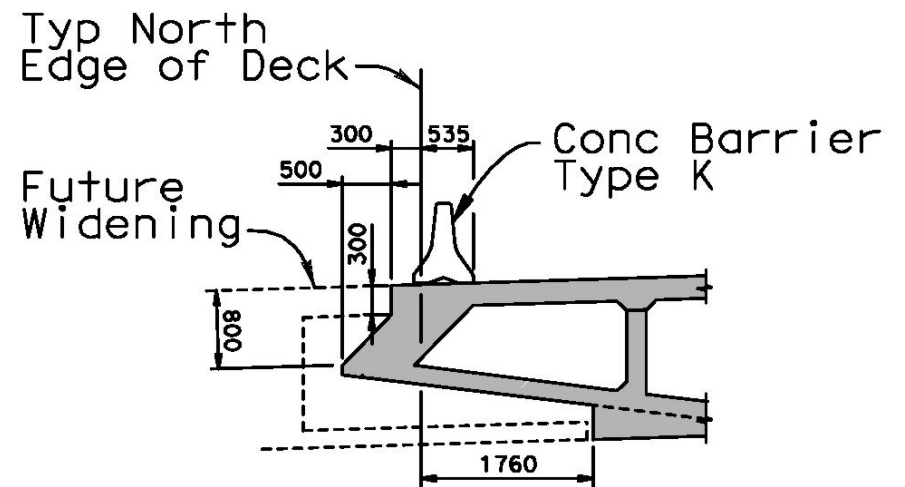
**NOTE: UNIT PRICES BASED ON THOSE FROM  
LOW BID ON YBITS 1 CONTACT**

# STRUCTURAL CCO REQUEST

## EDGE OF DECK MODIFICATIONS



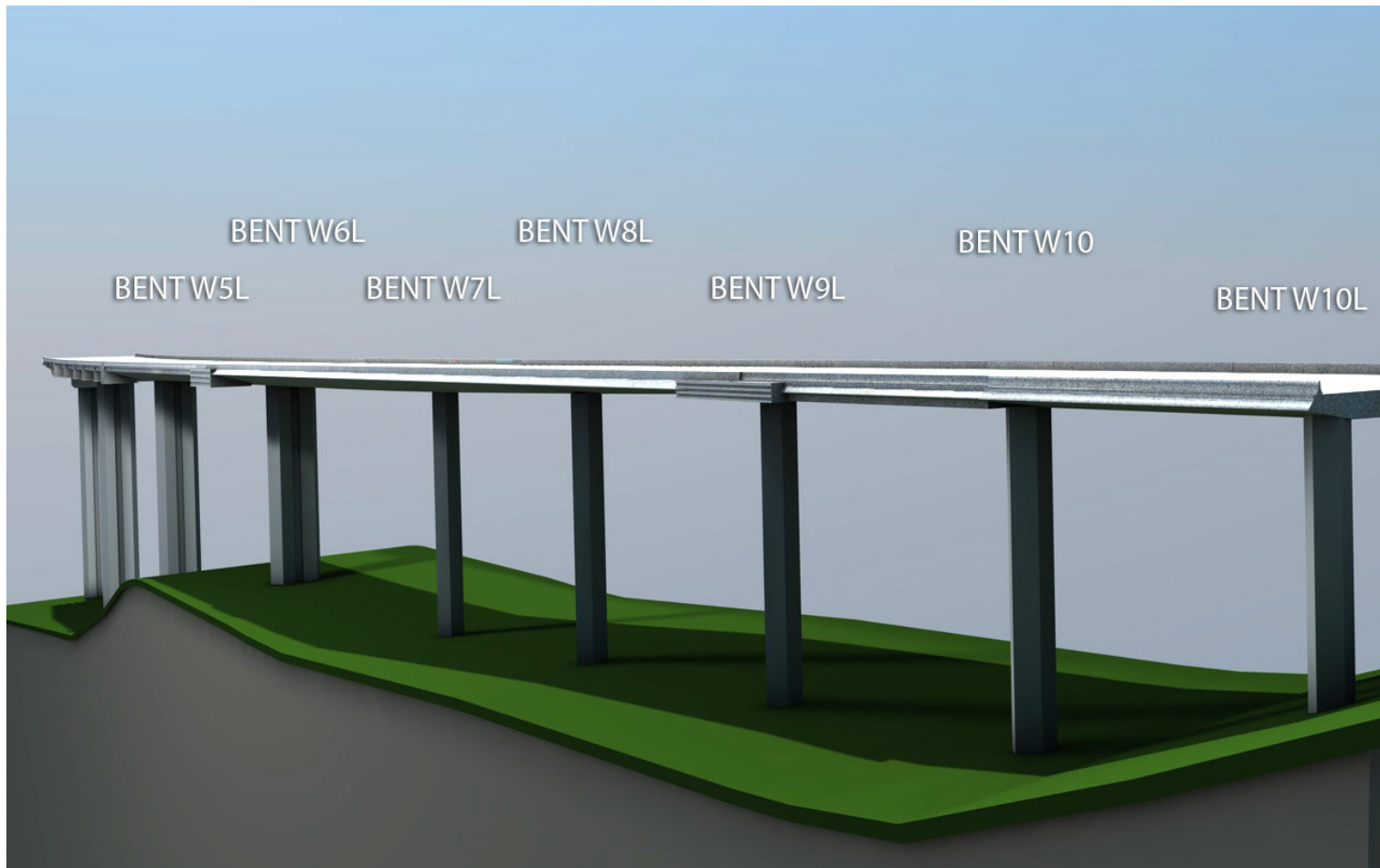
TYPICAL EDGE DETAIL



MODIFIED EDGE DETAIL

# STRUCTURAL CCO REQUEST

## EDGE OF DECK MODIFICATIONS



**WESTBOUND OFF-RAMP & ON-RAMP**





## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** September 27, 2010

**FR:** Steven Hulsebus, Toll Bridge Program Design Manager, Caltrans

**RE:** Agenda No. 5d2  
Item- San Francisco-Oakland Bay Bridge Updates  
OTD2 Bicycle Access Options

---

**Recommendation:**

For Information Only

**Cost:**

N/A

**Schedule Impacts:**

N/A

**Discussion:**

The revised detour and staging concept in the Oakland touchdown area currently being pursued affects how access to the new bridge at the time of bridge opening can occur for bicyclists and pedestrians. Bicycle and pedestrian access is not under consideration while the detours are in use (since traffic is still using the existing bridge).

Two detour options (alignment V9 and alignment V7) are presented here that show the relationship between the permanent eastbound roadway and the detour. It is from these relationships that the possibility of temporary bicycle and pedestrian access can be examined. One shows the alignment that staff has been given direction to pursue (an alignment defined so as to minimize impacts to the westernmost billboard – alignment V9). The intent of the other alignment is to move it as far south as possible so as to maximize the amount of permanent features that can be constructed as part of the detour – alignment V7 (which results in major impacts to the two westernmost billboards and the cell sites).

Sample section views are attached to show the differences between these two options.

**Option 1** (alignment that minimizes impacts to the westernmost billboard – V9):

The right shoulder at the time of eastbound opening will be minimal (see section B-B and C-C) – so any access options for bicyclists and pedestrians that were previously

studied that utilized this shoulder are no longer viable. The only available option is to utilize Burma Road (and its extension to the west of Pier 7) and then access the new bridge via a trestle or elevator (it needs to be stated that use of the extension of Burma Road may or may not allow bicycle and pedestrian use). Utilizing this way to access the new bridge would mean that bicyclists and pedestrians will share Burma Road and the area at the end of the Oakland Mole with Caltrans, the contractor(s), EBMUD, and PG&E while still a lot of construction is left to do.

The right shoulder at the time of opening is minimal due to the need to obtain satisfactory geometric requirements for the westbound and eastbound detours (maximizing sight distance and providing comfortable speed considering the various constraints) while minimizing impacts to the westernmost billboard. We are following direction from Headquarters Design in setting the requirements for the detours as these will entail mandatory design exceptions and HQ approval is needed for these. As can be seen in the section B-B and C-C, the permanent bicycle and pedestrian path cannot be constructed until after the detours have been removed.

**Option 2** (alignment that maximizes the amount of permanent features constructed as part of the detours – V7):

This option moves the alignment as far south as allowed without impacting the newly constructed electrical substation and the EBMUD outfall pipe. This option would require removing the two westernmost billboards and two cell sites. This alignment allows for the construction of the permanent eastbound lanes and shoulders to full standards. Like the alignment in Option 1 however, the permanent bicycle and pedestrian path cannot be constructed and temporary access would have to be provided. The temporary access could utilize the right shoulder of the eastbound direction and thus, the options previously looked at for accessing the new bridge at the time of bridge opening utilizing the right shoulder are viable with the same pros and cons. However, how to route the bicycle and pedestrian path through the area where the westbound and eastbound detours were located needs to be analyzed closer to see how feasible this might be. Previously, only the eastbound detour was involved.

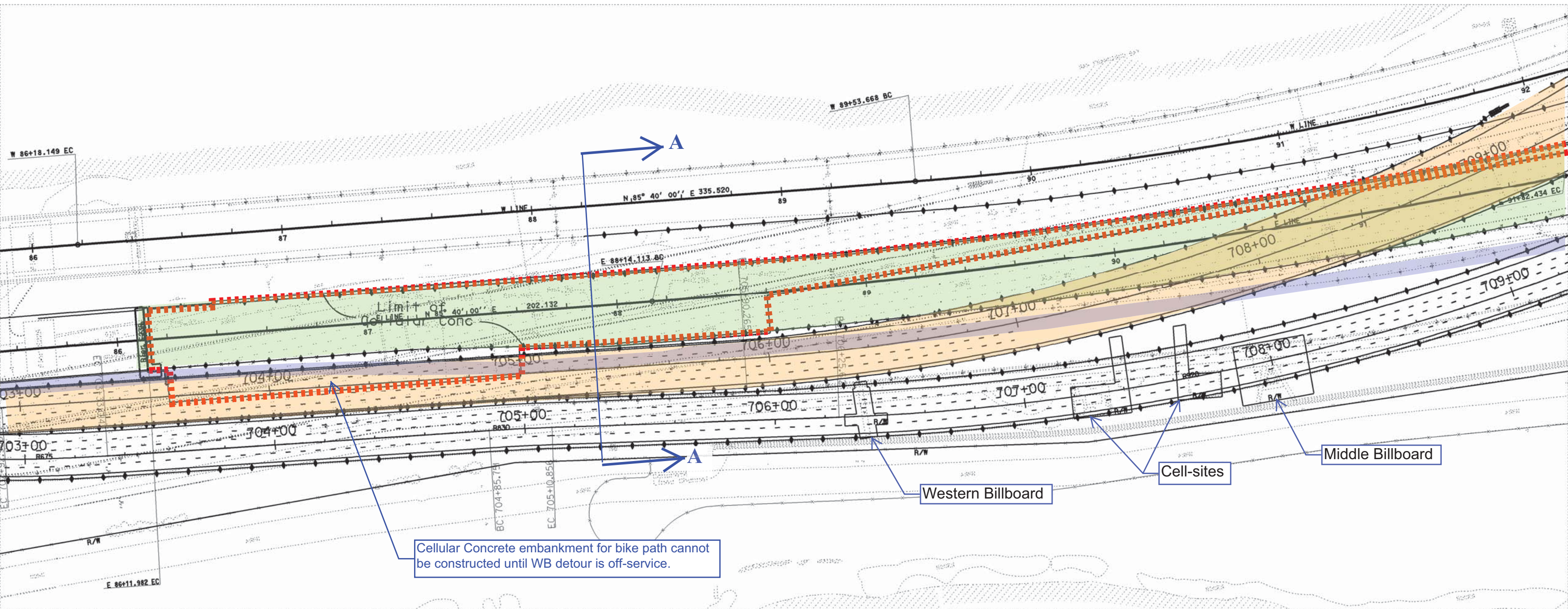
The revised detour and staging concept in the Oakland touchdown area currently being pursued will affect how access to the new bridge might be provided for bicyclists and pedestrians. Temporary access may be able to be provided but the permanent bicycle and pedestrian path will have to be constructed after the opening

of the new bridge. It is very possible that the temporary access (if provided) will need to be closed in order to construct the permanent access.

**Attachment(s):**

1. OTD-SSD Aln V7 - Southern Alignment Option
2. Design Study Only - OTD-SSD Aln V7 - Southern Alignment Option
3. OTD-SSD Aln V9 - Northern Alignment Option (Preferred Alternative)
4. Design Study Only - OTD-SSD Aln V9 - Northern Alignment Option, Section B-B
5. Design Study Only - OTD-SSD Aln V9 -Northern Alignment Option, Section C-C





..... Limit of Cellular Concrete

Embankment required for new EB Roadway

OTD-SSD WB Detour

Permanent Bikepath Alignment

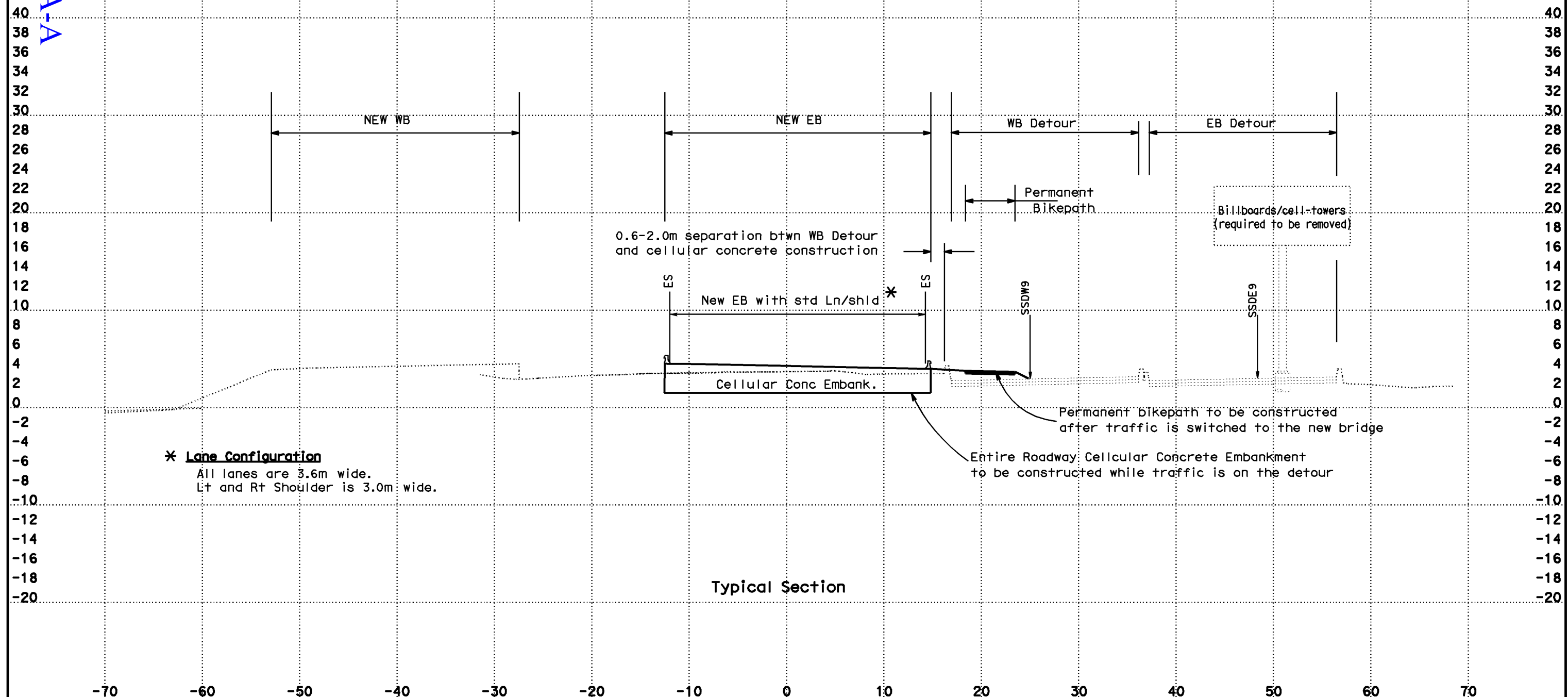
## OTD-SSD Aln V7 - Southern Alignment Option



# DESIGN STUDY ONLY

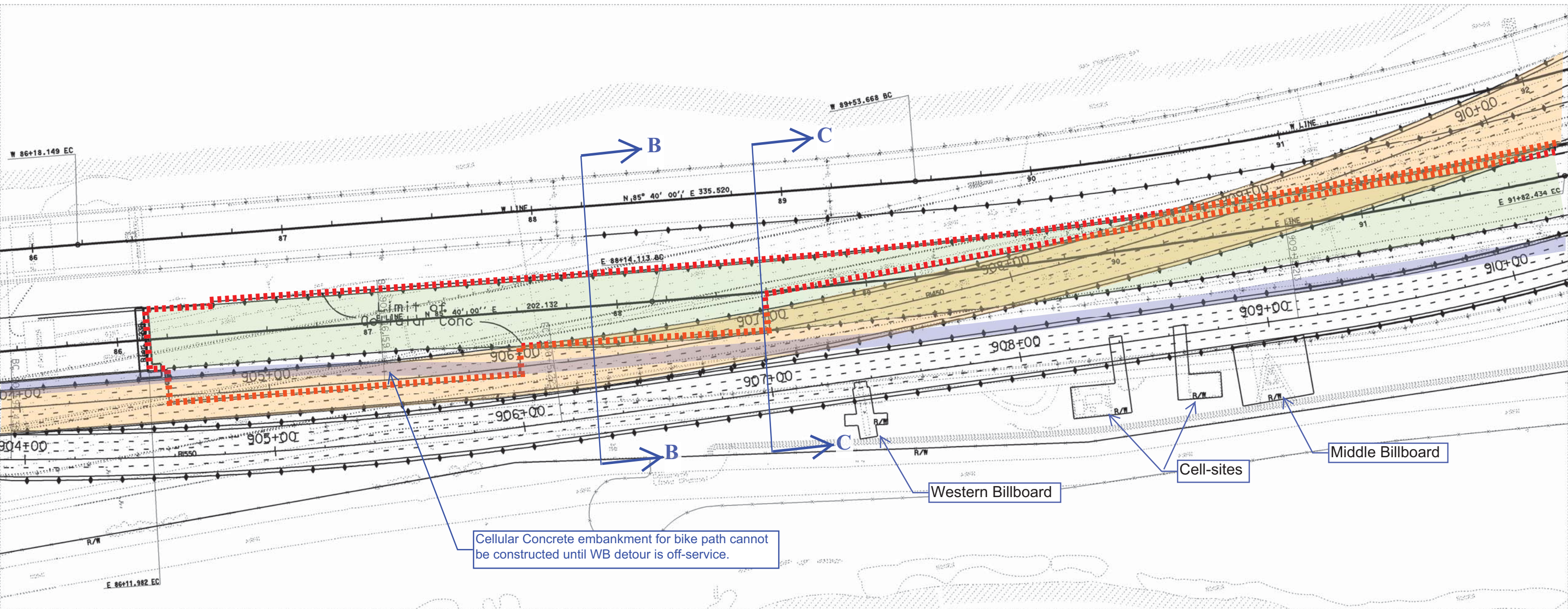
OTD-SSD AIn V7 - Southern Alignment Option

Section A-A



Typical Section





- Limit of Cellular Concrete
- Embankment required for new EB Roadway
- OTD-SSD WB Detour
- Permanent Bikepath Alignment

**OTD-SSD Aln V9 - Northern Alignment Option**  
 (Preferred Alternative)



# DESIGN STUDY ONLY

OTD-SSD AIn V9 - Northern Alignment Option

Section B-B

NEW WB

NEW EB

WB Detour

EB Detour

Permanent  
Bikepath

Bk of temp.  
Barr (new EB)

Bk of temp.  
Barr (WB Detour)

ES

ES

New EB on sub-std Ln/shld

Var. 0.3-7.1m

Var. 1.0-9.6m

K-rails

Cellular Conc Embank.

elev.: 0.0 to 2.1m

Btm of Cellular Conc

Permanent bikepath to be constructed  
after traffic is switched to the new bridge

Cellular Concrete to be constructed  
after traffic is switched to the new bridge

## \* Lane Configuration

All lanes are 3.3m wide except the outer lane is 3.6m  
Lt and Rt Shoulder is 0.3m wide.

Typical Section

Scale Ratio:

All Dimensions are Meters

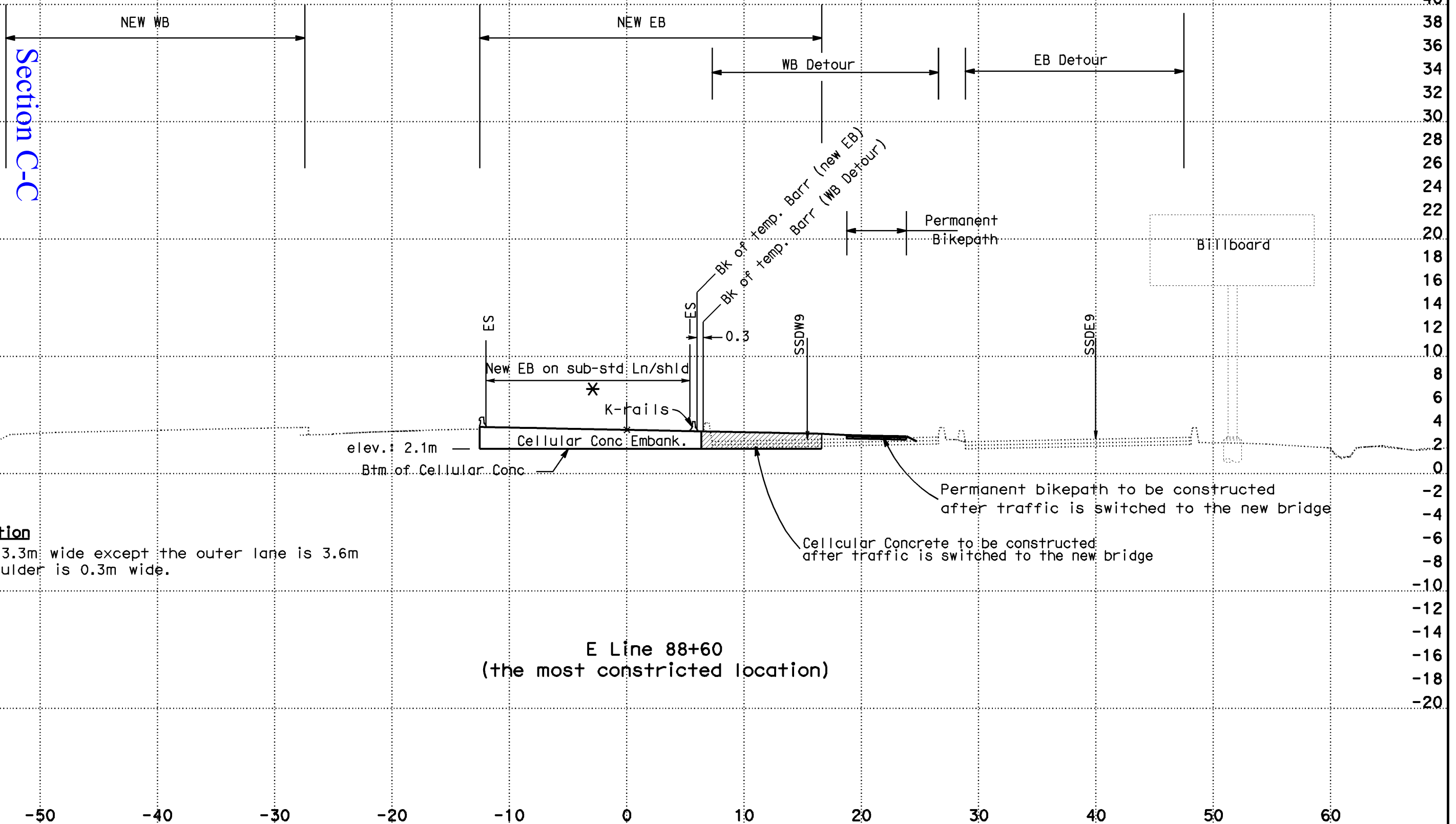
E1  
CROSS SECTIONS  
SHEET 2 OF 3

DATE: 9/27/2010



# DESIGN STUDY ONLY

OTD-SSD AIn V9 - Northern Alignment Option



DATE: 9/27/2010

Scale Ratio: 1:200 Horiz.  
1:200 Vert.

All Dimensions are Meters

**E1**  
**CROSS SECTIONS**  
SHEET 3 OF 3

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** September 27, 2010

**FR:** Jason Weinstein, Senior Program Coordinator, BATA

**RE:** Agenda No. - 6

Item- Antioch/ Dumbarton Bridge Seismic Retrofit Updates

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**Recommendation:**

For Information Only

**Cost:**

N/A

**Schedule Impacts:**

N/A

**Discussion:**

Antioch Bridge

The Department is continuing to review submittals for Structural Steel Shop Drawings and Bridge Jacking Plans. Progress in the field continues without disturbing the owls. An update of on-going field work is as follows:

- Temporary Roadways #2 and #3 remain under construction with good progress being made.
- Completed installing stair towers at 11 locations: piers 22, 23, 25-30, 33, 36, and 38. Platforms have been installed at 12 locations: piers 27 through 38.
- Concrete seat extension work continues at Abutment 1 and Pier 41

Earthquake Protection Systems (EPS) has confirmed the first batch of seismic isolation bearings will be completed by October 22, 2010. EPS will deliver six Type II bearings and two Type I bearings from this first batch to the University of California in San Diego (UCSD) for independent assurance testing. Quality Assurance (QA) testing of these bearings will take place between October 25, 2010 and November 5, 2010. Two Type II bearings will be installed at Pier 40 in late October 2010.

## *Memorandum*

Steel fabrication for Antioch is taking place in Daegu, South Korea and Spokane, Washington. Trade Winds Steel Group (TWSG) will provide steel column casings from South Korea for the concrete pile extensions that support the slab portion of the bridge on Sherman Island. Brooklyn Iron Works (BIW) will provide the steel pier cross-bracing members from Spokane, Washington. The material from Spokane represents the majority of the steel on the project.

There is an outstanding issue with respect to welding at BIW. The Department has been put on notice by California Engineering Contractors (CEC) that the fabrication of the column cross-bracing at Antioch is being delayed at BIW due to CCO 7.

CCO 7 was written before work started to resolve a conflict in the Special Provisions relating to bridge welding of Hollow Structural Section (HSS) tubes. The conflict is HSS welding requirements are in AWS D1.1, but Section 55-3.17 of the Standard Specifications requires bridge welding to comply with the more stringent welder qualification and inspection requirements in AWS D1.5. The CCO addresses the conflict by requiring that T and K joints of the tubular members be qualified by making a full-size mock-up with macros approved by the Engineer and MT (magnetic particle) testing of 25% of the production welds.

The approved baseline schedule showed welding fabrication starting at BIW on August 26, 2010, and CEC says they cannot produce shop drawings until the mock-ups are approved. METS, CEC's Quality Control Manager, and BIW met in Spokane, Washington to address the welding procedures, and to come to a meeting-of-the-minds regarding the fabrication sequence. A mock-up has been proposed to demonstrate BIW's request to certify their welders.

There are currently the 16 days of delay to date, which the Department owns because of CCO 7. Provided one week is needed to complete the welding procedures and one week is required to produce the mock-up then the total delay could be limited to 26 days. If mock-up macros are not approved by the Engineer on the first go around, a potential delay of 30-40 days could result. With TRO at \$20,000/day and TRO+, a 40 day delay could approach \$1 million.



Dumbarton: Bridge:

On June 15, 2010, the Department opened seven bids for the Dumbarton Bridge Seismic Retrofit Project. The low bidder, Shimmick Construction Company, Inc. bid \$46.6 M and 460 working days. The project was awarded to Shimmick on August 6, 2010 and was approved on August 26, 2010. The first working day is scheduled for October 20, 2010.

The Department and Contractor have established field offices near the Dumbarton Bridge for the administration of the contract. Currently the Department is in the process of reviewing submittals from the contractor in preparation for the beginning of field work.

**Attachment(s):**

N/A

## **ITEM 7: OTHER BUSINESS**

No Attachments